Pre-Separation Job Durations and Unemployment Insurance Eligibility

Final Report

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The views expressed in this study are the personal views of the author and not necessarily those of HRDC.

Preface

Human Resources Development Canada (HRDC), in its policies and programs, is committed to assisting all Canadians in their efforts to live contributing and rewarding lives and to promote a fair and safe workplace, a competitive labour market with equitable access to work, and a strong learning culture.

To ensure that public money is well spent in pursuit of this mission, HRDC rigorously evaluates the extent to which its programs are achieving their objectives. To do this, the Department systematically collects information to evaluate the continuing rationale, net impacts and effects, and alternatives for publicly-funded activities. Such knowledge provides a basis for measuring performance and the retrospective lessons learned for strategic policy and planning purposes.

As part of this process, the Department commissioned five formal evaluation studies on how Canadians adjusted to the 1994 UI reforms. These studies were performed by external academic subject-matter experts. Each evaluation represents a stand alone analysis of a specific topic.

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Executive Summary

Bill C-17 rather quietly imposed what are probably the largest cutbacks in Canada's Unemployment Insurance (UI — now Employment Insurance) system since it was first introduced.

- It increased the minimum entrance requirement in high unemployment rate regions, making it harder for individuals to qualify for a claim and potentially disentitling them from benefits altogether if they could not find the one or two extra weeks of work.

- It reduced the weeks of benefits claimants were entitled to by as much as 16 weeks, depending on their employment history and local labour market conditions.

In this report we examine which workers — in terms of province, industry and gender — were hurt the most by these benefit cuts, as well as the extent to which workers were able to make changes in their economic behaviour that cushioned the impact of the cuts. We study only the regular UI program, and do not look at, for example, special benefits, or the program for fishers.

Overall, we find that Bill C-17:

- reduced the number of benefit weeks for which an average separating worker was eligible by 7.6 weeks for both men and women;

- reduced the number of benefit weeks actually received in an average UI claim by about 3 weeks for men and 4 weeks for women;

- induced only modest variation in losses by province or by industry.

Losses are, however, higher in the high-unemployment provinces and industries with, for example, Newfoundland experiencing the largest provincial receipt loss per claim of 5.1 weeks for women, and fishing the largest industrial receipt loss per claim of 6.1 weeks, again for women. Overall though, losses are fairly similar across gender lines.

HRDC's estimates of these losses, based on a long standing practice of only building well-demonstrated behavioural changes into the simulation and holding other behavioural changes constant, predicted much larger and dramatically dissimilar losses across industries and provinces.

- A key reason why C-17-induced losses per separation do not vary more dramatically across provinces and industries concerns behavioural changes in qualifying weeks at the entrance requirement in high unemployment rate regions. Most workers concentrated in the high-unemployment provinces and industries were able to obtain the extra weeks of work required to qualify for UI benefits.

Most workers in high unemployment rate regions who would have been completely disentitled were they unable to obtain one or two extra weeks of work were, in fact, able to accumulate enough extra weeks to substantially mitigate the effects the Bill would otherwise have had on their UI eligibility. While in some cases — notably the fishing industry — these extra weeks of work may have been the results of other, compensatory government programs, they play an important role in determining the ultimate industrial and regional impact of the UI cutbacks in Bill C-17 whatever their source. However, workers who were not potentially totally disentitled were much less able to adjust their weeks of work in response to Bill C-17.

- Though their losses were quite large, with 50 percent of workers losing between 8 and 16 weeks of benefit eligibility, those workers separating from an employer but only losing UI eligibility (and not being totally disentitled), did not obviously obtain more weeks of work in their UI qualifying period to increase their UI benefit duration.

Finally, while C-17's impact on UI eligibility and receipt *per job separation* were surprisingly equally distributed across provinces and industries, it is important to note that its *per worker*, and *per capita* impact was not. This occurred because the probability of experiencing a job separation, and claim, varied across provinces.

- Because workers in high-unemployment provinces and industries (essentially the Atlantic provinces and to some extent Quebec, and the primary industries plus construction) are much more likely to experience a job separation, a randomly-selected worker in those provinces and industries could expect to lose more weeks of UI benefits than a worker elsewhere in Canada due to C-17.

For example, an average woman employed in the fishing industry (not including self-employed fishers who are covered by a separate program) collected about 22 weeks of UI benefits per year before the introduction of C-17, this fell by just over 5 weeks, to 17, following the introduction of Bill C-17; similarly the average man in the fishing industry, pre-C-17, collected UI for about 7 weeks per year, this dropped to about 6 after the Bill. Forestry workers, of both sexes, claimed over 14 weeks of UI per year prior to Bill C-17, and this dropped by about 2 to 3 weeks following it. In stark contrast, Canada-wide

average weeks of UI receipt per worker fell by about one half of a week. Average annual receipt by female workers dropped from about 3 to 2.5 weeks; the drop for males was from about 3.6 to 3.1.

Comparable differences in the legislation's impact across provinces on a per capita basis were observed. In Newfoundland the average man and woman claimed 3.8 and 5.2 weeks of UI in the year before Bill C-17, and lost 0.61 and 0.80 weeks as result of it respectively. For the country as whole though, the average per capita claim was only 1.2 weeks and 1.7 weeks for men and women respectively, and the losses were about 0.2 for each. Clearly, the cuts had a disproportionate impact on those provinces and industries which were the highest users of the UI system. Though the subsidization is smaller following Bill C-17, it has not, however, by any means ended the massive cross-subsidization of provinces east of the Ottawa River, and of the agricultural, fishing, forestry, and construction industries, by the other provinces and industries in Canada.

1. Introduction

On May 31, 1994, Parliament adopted Bill C-17, enacting a number of changes to the Canadian Unemployment Insurance (UI) system, effective on July 3, 1994. These changes, while less publicized, and less hotly contested than those in some other recent changes to the UI system (for example, 1993's Bill C-113, or the system's more recent conversion to "employment insurance"), enacted probably the most dramatic cuts in UI eligibility since the system was first introduced. In which provinces and industries were workers most affected by these cuts? Were men or women more affected? And to what extent were workers able to mitigate the effects of the cuts by changing their employment and job search behaviour? These are the questions addressed in this report for the regular UI program.

Section 2 of the report describes the main policy changes brought about by Bill C-17. Section 3 describes the data and methodology we use to analyse the effects of Bill C-17. Sections 4 and 5 present our estimates of the effects of C-17 on two main outcomes respectively: workers' UI *entitlements* (given a worker loses a job, or starts a UI claim, how many weeks of UI benefits can he or she can count on?) and workers' actual *receipt* of UI (how many weeks of benefits do workers actually draw?). Conclusions are summed up in a final section.

2. *The Policy Changes*

Both before and after the introduction of Bill C-17, the number of weeks of unemployment insurance benefits to which job losers were entitled in Canada were linked by legislation to two things: the number of weeks they had worked in paid, covered employment in the 52 weeks prior to the separation (ROE qualifying weeks), and the rate of unemployment in their local UI region. Before the introduction of Bill C-17, one needed at least 10 weeks of work in the last 52 to receive any UI benefits, and the maximum number of benefit weeks for which one could qualify was 50. Bill C-17 substantially changed this relation between ROE qualifying weeks and UI benefit entitlements. The full schedules of qualifying weeks and entitlement weeks are presented in Tables 1 to 3; they are illustrated graphically for three different local unemployment rates in Figure 1. As can be seen from both the Figure and Tables, Bill C-17 did two main things. First, in regions with high unemployment (>14 percent), it increased the number of work weeks required to qualify for UI from 10 to 12: now no one in Canada could claim UI with less than 12 weeks of work in the previous year. Second, in all regions, regardless of the local unemployment rate, the Bill substantially reduced the UI entitlements of most workers with less than a full year of work in the previous year. This effect is particularly strong in regions slightly above the national average unemployment rate (e.g. 11-14 percent), and for workers with 20 to 40 qualifying weeks, as is shown in the middle panel of Figure 1 and in Table 3; the largest reduction of 16 weeks occurred for workers in these situations. All told, relative to the preexisting legislation at the time (defined in Bill C-113), Bill C-17 thus imposed major penalties on the UI entitlements of workers with less than average to somewhat above-average unemployment rates.

Bill C-17 implemented two significant changes to the UI rules. First, it increased the minimum number of work weeks required to qualify for UI from 10 to 12. Second, it substantially reduced the UI entitlements of most workers with less than a full year of work in the previous year.

Table 1
Legislated weeks of UI Entitlement before Bill C-17

Weeks of work	Unemployment Rate in claimant's region					
	6% and under	Over 6% to 7%	Over 7% to 8%	Over 8% to 9%	Over 9% to 10%	Over 10% to 11%
10	0	0	0	0	0	0
11	0	0	0	0	0	0
12	0	0	0	0	0	0
13	0	0	0	0	0	0
14	0	0	0	0	0	0
15	0	0	0	0	0	30
16	0	0	0	0	27	31
17	0	0	0	24	28	32
18	0	0	21	25	29	33
19	0	19	22	26	30	34
20	17	20	23	27	31	35
21	18	21	24	28	32	36
22	19	22	25	29	33	37
23	20	23	26	30	34	38
24	21	24	27	31	35	39
25	22	25	28	32	36	40
26	22	25	28	32	36	40
27	23	26	29	33	37	41
28	23	26	29	33	37	41
29	24	27	30	34	38	42
30	24	27	30	34	38	42
31	25	28	31	35	39	43
32	25	28	31	35	39	43
33	26	29	32	36	40	44
34	26	29	32	36	40	44
35	27	30	33	37	41	45
36	27	30	33	37	41	45
37	28	31	34	38	42	46
38	28	31	34	38	42	46
39	29	32	35	39	43	47
40	29	32	35	39	43	47
41	30	33	36	40	44	48
42	30	33	36	40	44	48
43	31	34	37	41	45	49
44	31	34	37	41	45	49
45	32	35	38	42	46	50
46	32	35	38	42	46	50
47	33	36	39	43	47	50
48	33	36	39	43	47	50
49	34	37	40	44	48	50
50	34	37	40	44	48	50
51	35	38	41	45	49	50
52	35	38	41	45	49	50

Table 1
Legislated weeks of UI Entitlement before Bill C-17 (cont'd)

Weeks of work	Unemployment rate in claimant's region					
	Over 11% to 12%	Over 12% to 13%	Over 13% to 14%	Over 14% to 15%	Over 15% to 16%	Over 16%
10	0	0	0	0	37	39
11	0	0	0	36	38	40
12	0	0	35	37	39	41
13	0	34	36	38	40	42
14	33	35	37	39	41	43
15	34	36	38	40	42	44
16	35	37	39	41	43	45
17	36	38	40	42	44	46
18	37	39	41	43	45	47
19	38	40	42	44	46	48
20	39	41	43	45	47	49
21	40	42	44	46	48	50
22	41	43	45	47	49	50
23	42	44	46	48	50	50
24	43	45	47	49	50	50
25	44	46	48	50	50	50
26	44	46	48	50	50	50
27	45	47	49	50	50	50
28	45	47	49	50	50	50
29	46	48	50	50	50	50
30	46	48	50	50	50	50
31	47	49	50	50	50	50
32	47	49	50	50	50	50
33	48	50	50	50	50	50
34	48	50	50	50	50	50
35	49	50	50	50	50	50
36	49	50	50	50	50	50
37	50	50	50	50	50	50
38	50	50	50	50	50	50
39	50	50	50	50	50	50
40	50	50	50	50	50	50
41	50	50	50	50	50	50
42	50	50	50	50	50	50
43	50	50	50	50	50	50
44	50	50	50	50	50	50
45	50	50	50	50	50	50
46	50	50	50	50	50	50
47	50	50	50	50	50	50
48	50	50	50	50	50	50
49	50	50	50	50	50	50
50	50	50	50	50	50	50
51	50	50	50	50	50	50
52	50	50	50	50	50	50

Table 2
Legislated weeks of UI Entitlement after Bill C-17

Weeks of work	Unemployment rate in claimant's region					
	6% and under	Over 6% to 7%	Over 7% to 8%	Over 8% to 9%	Over 9% to 10%	Over 10% to 11%
12	0	0	0	0	0	0
13	0	0	0	0	0	0
14	0	0	0	0	0	0
15	0	0	0	0	0	21
16	0	0	0	0	20	22
17	0	0	0	18	20	22
18	0	0	17	19	21	23
19	0	15	17	19	21	23
20	14	16	18	20	22	24
21	14	16	18	20	22	24
22	15	17	19	21	23	25
23	15	17	19	21	23	25
24	16	18	20	22	24	26
25	16	18	20	22	24	26
26	17	19	21	23	25	27
27	17	19	21	23	25	27
28	18	20	22	24	26	28
29	18	20	22	24	26	28
30	19	21	23	25	27	29
31	19	21	23	25	27	29
32	20	22	24	26	28	30
33	20	22	24	26	28	30
34	21	23	25	27	29	31
35	21	23	25	27	29	31
36	22	24	26	28	30	32
37	22	24	26	28	30	32
38	23	25	27	29	31	33
39	23	25	27	29	31	33
40	24	26	28	30	32	34
41	25	27	29	31	33	35
42	26	28	30	32	34	36
43	27	29	31	33	35	37
44	28	30	32	34	36	38
45	29	31	33	35	37	39
46	30	32	34	36	38	40
47	31	33	35	37	39	41
48	32	34	36	38	40	42
49	33	35	37	39	41	43
50	34	36	38	40	42	44
51	35	37	39	41	43	45
52	36	38	40	42	44	46

Table 2
Legislated weeks of UI Entitlement after Bill C-17
(cont'd)

Unemployment rate in claimant's region

Weeks of work	Over 11% to 12%	Over 12%to 13%	Over 13% to 14%	Over 14% to 15%	Over 15% to 16%	Over 16%
12	0	0	26	28	30	32
13	0	24	26	28	30	32
14	23	25	27	29	31	33
15	23	25	27	29	31	33
16	24	26	28	30	32	34
17	24	26	28	30	32	34
18	25	27	29	31	33	35
19	25	27	29	31	33	35
20	26	28	30	32	34	36
21	26	28	30	32	34	36
22	27	29	31	33	35	37
23	27	29	31	33	35	37
24	28	30	32	34	36	38
25	28	30	32	34	36	38
26	29	31	33	35	37	39
27	29	31	33	35	37	39
28	30	32	34	36	38	40
29	30	32	34	36	38	40
30	31	33	35	37	39	41
31	31	33	35	37	39	41
32	32	34	36	38	40	42
33	32	34	36	38	40	42
34	33	35	37	39	41	43
35	33	35	37	39	41	43
36	34	36	38	40	42	44
37	34	36	38	40	42	44
38	35	37	39	41	43	45
39	35	37	39	41	43	45
40	36	38	40	42	44	46
41	37	39	41	43	45	47
42	38	40	42	44	46	48
43	39	41	43	45	47	49
44	40	42	44	46	48	50
45	41	43	45	47	49	50
46	42	44	46	48	50	50
47	43	45	47	49	50	50
48	44	46	48	50	50	50
49	45	47	49	50	50	50
50	46	48	50	50	50	50
51	47	49	50	50	50	50
52	48	50	50	50	50	50

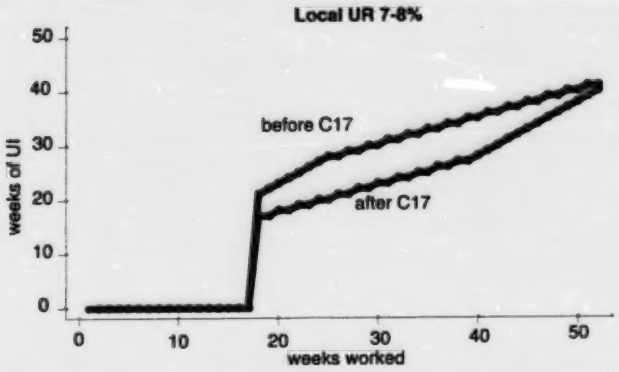
Table 3
Legislated reductions in weeks of UI Entitlement due to Bill C-17

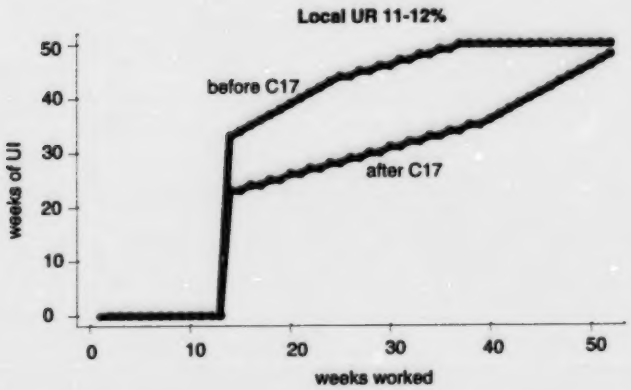
Weeks of work	Unemployment rate in claimant's region					
	6% and under	Over 6% to 7%	Over 7% to 8%	Over 8% to 9%	Over 9% to 10%	Over 10% to 11%
10	0	0	0	0	0	0
11	0	0	0	0	0	0
12	0	0	0	0	0	0
13	0	0	0	0	0	0
14	0	0	0	0	0	0
15	0	0	0	0	0	9
16	0	0	0	0	7	9
17	0	0	0	6	8	10
18	0	0	4	6	8	10
19	0	4	5	7	9	11
20	3	4	5	7	9	11
21	4	5	6	8	10	12
22	4	5	6	8	10	12
23	5	6	7	9	11	13
24	5	6	7	9	11	13
25	6	7	8	10	12	14
26	5	6	7	9	11	13
27	6	9	8	10	12	14
28	5	6	7	9	11	13
29	6	7	8	10	12	14
30	5	6	7	9	11	13
31	6	7	8	10	12	14
32	5	6	7	9	11	13
33	6	7	8	10	12	14
34	5	6	7	9	11	13
35	6	7	8	10	12	14
36	5	6	7	9	11	13
37	6	7	8	10	12	14
38	5	6	7	9	11	13
39	6	7	8	10	12	14
40	5	6	7	9	11	13
41	5	6	7	9	11	13
42	4	5	6	8	10	12
43	4	5	6	8	10	12
44	3	4	5	7	9	11
45	3	4	5	7	9	11
46	2	3	4	6	8	10
47	2	3	4	6	8	9
48	1	2	3	5	7	8
49	1	2	3	5	7	7
50	0	1	2	4	6	6
51	0	1	2	4	6	5
52	-1	0	1	3	5	4

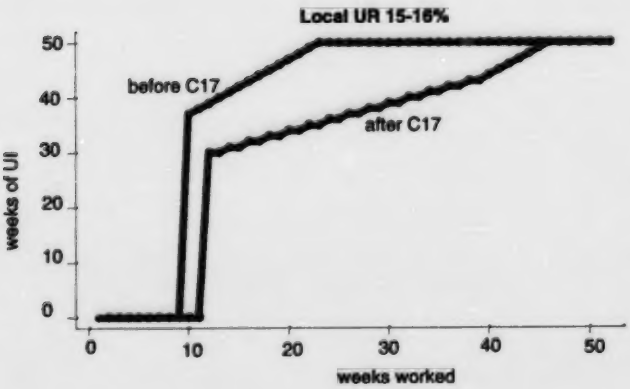
Table 3
Legislated reductions in weeks of UI Entitlement due to Bill C-17 (cont'd)

Weeks of work	Unemployment rate in claimant's region					
	Over 11% to 12%	Over 12% to 13%	Over 13% to 14%	Over 14% to 15%	Over 15% to 16%	Over 16%
10	0	0	0	0	37	39
11	0	0	0	36	38	40
12	0	0	9	9	9	9
13	0	10	10	10	10	10
14	10	10	10	10	10	10
15	11	11	11	11	11	11
16	11	11	11	11	11	11
17	12	12	12	12	12	12
18	12	12	12	12	12	12
19	13	13	13	13	13	13
20	13	13	13	13	13	13
21	14	14	14	14	14	14
22	14	14	14	14	14	13
23	15	15	15	15	15	13
24	15	15	15	15	14	12
25	16	16	16	16	14	12
26	15	15	15	15	13	11
27	16	16	16	15	13	11
28	15	15	15	14	12	10
29	16	16	16	14	12	10
30	15	15	15	13	11	9
31	16	16	15	13	11	9
32	15	15	14	12	10	8
33	16	16	14	12	10	8
34	15	15	13	11	9	7
35	16	15	13	11	9	7
36	15	14	12	10	8	6
37	16	14	12	10	8	6
38	15	13	11	9	7	5
39	15	13	11	9	7	5
40	14	12	10	8	6	4
41	13	11	9	7	5	3
42	12	10	8	6	4	2
43	11	9	7	5	3	1
44	10	8	6	4	2	0
45	9	7	5	3	1	0
46	8	6	4	2	0	0
47	7	5	3	1	0	0
48	6	4	2	0	0	0
49	5	3	1	0	0	0
50	4	2	0	0	0	0
51	3	1	0	0	0	0
52	2	0	0	0	0	0

Figure 1
UI Eligibility and Weeks Worked







3. Data and Methodology

1. Definitions

Figure 1 and Table 3 clearly suggest that the effects of Bill C-17 on workers' UI entitlements and on their ultimate receipt of UI are likely to be greatest in provinces and industries with high unemployment rates, and where workers' labour market histories involve a greater amount of part-year work. In a sense, this should not be surprising since at least part of the intent of the legislation may have been to reduce the implicit subsidy to part-year work inherent in the UI system. To know how *many* weeks of UI entitlement, and/or UI benefits, workers actually lost, to know how this varied across provinces and industries, and to know to what extent workers were able to make behavioural changes in their work histories to mitigate the effects of these program cuts, a more detailed methodology and conceptual framework is needed. We outline that methodology in this section, beginning with some definitions.

Two main outcomes: eligibility and receipt

First, as already mentioned, in this study we measure the effects of Bill C-17 on *two main outcomes*: total weeks of UI eligibility, and total weeks of UI benefits actually received. Clearly, weeks of eligibility are of direct interest to workers when they first become unemployed: the total number of UI benefit weeks they could count on, if needed, may be an important determinant of workers' financial security, as well as an important determinant of the job search strategies they undertake. At the same time, however, most unemployed workers in Canada, at least prior to C-17, did not use up all the weeks of UI benefits to which they are entitled. Thus, especially from the point of view of the expenditures of the UI system, or if our interest is to measure changes in the total dollar benefits received by a particular province or industry, it is also important to calculate incidence in terms of the total number of benefit weeks actually received. We conduct both exercises in this report, devoting Section 4 to an analysis of entitlement changes, and Section 5 to an analysis of changes in actual benefit weeks received.

Two possible behavioural changes: qualifying weeks and search intensity

Second, in assessing the behavioural responses of workers (and perhaps firms) to Bill C-17, we need to consider *two possible kinds of behavioural change*. One of these is changes in qualifying weeks of employment. If

workers try to compensate for reductions in UI eligibility by accumulating extra weeks of work, we would expect qualifying weeks to increase, especially among workers who would otherwise be totally disentitled from UI (i.e. those with 10 or 11-week work histories). These behavioural changes will affect both workers' UI eligibility and receipt, in both cases acting to *mitigate* the effects of the UI program cuts on the declines in these outcome measures. A second possible response to the shorter duration of UI benefits is for workers to search harder, or begin to search earlier, for new jobs while on a UI claim. Because this effect operates to change the length of time one receives benefits once one has already become unemployed, it is relevant only to the actual weeks of UI received and not to the original entitlement. Further, to the extent that this behavioural change leads workers on UI to find re-employment earlier than they otherwise would have, it will tend not to mitigate but to *accentuate* the effects of the UI program cuts on UI receipt, reducing it even more than what would be brought about by the eligibility cuts alone.

Three units of analysis: claims, separation and persons

A third and final definitional matter concerns the populations for which our incidence calculations are made. We present results for *three main populations, or units of analysis*: UI claims, separations, and persons. When we present incidence calculations per UI claim, we ask the following question: "By how many weeks did Bill C-17 shorten the average UI claim?" When we present results on a per-separation basis, we ask "Given I lose my job, how many fewer weeks am I likely to be entitled to (or actually receive)?" These losses differ from per-claim losses because not all workers who lose jobs either claim UI, or are eligible for UI — indeed some may be rendered ineligible by Bill C-17 itself. Finally, even though the UI system might, for example, treat all separations roughly equally regardless of where they occur, it may be the case that workers in some provinces or industries are much more likely to experience a separation in a given year, and thus be more likely to receive UI. Thus, especially if one is interested in calculating the effect of C-17 on the financial cross-subsidization that occurs across industries and provinces via the UI system, it is also of interest to develop per capita, or per-worker measures of incidence. Our per capita estimates of, say, C-17's effects on UI receipt ask: "How many fewer weeks of UI does the average worker in industry X, or the average adult resident in province Y, receive as a result of Bill C-17?"

Micro-accounting (nonparametric) approach

Our basic approach ... could best be termed a "micro-accounting" approach, which decomposes the entire distribution of changes in observed UI entitlement and receipt before and after the introduction of the Bill.

Our basic approach in this report to estimating the incidence of the cuts in Bill C-17, as well as the importance of worker's behavioural responses in mitigating or accentuating the effects of those cuts, might best be termed a "micro-accounting" approach, which decomposes the entire distribution of changes in observed UI entitlement and receipt before and after the introduction of the Bill. This methodology, which is at the same time conceptually simple and data-intensive, is based on the following: at most, there are only two kinds of behavioural changes through which the legislated effects of C-17 (shown in Table 3) must be "filtered" to determine the actual changes in UI benefits received by a particular sample of people: changes in qualifying weeks of work, and changes in unemployment durations once on claim. Given this, we can use the entire distributions of these two variables (qualifying weeks and weeks on claim) to compute counterfactual distributions of our outcome variables that show how much the outcome variable would have changed *had there been no changes in "economic behaviour" at all*. The discrepancy between these changes and the actual ones can then be interpreted as a combination of behavioural changes induced by the legislation, or behavioural changes caused by other factors that changed at the same time as the legislation changed, such as, perhaps, macroeconomic conditions.

This micro-accounting approach has, of course, both advantages and disadvantages over other methodologies, such as for example a regression-based one. A key advantage is the fact that we estimate, nonparametrically, the entire distribution of outcome changes, and can hold constant, again nonparametrically, the entire distribution of the two behavioural variables, rather than just means as are typically used in a regression context. A potential disadvantage may be a difficulty, in some cases, in separating behavioural effects that are induced by the legislation from other changes in behaviour that would have occurred anyway, due for example to improving macroeconomic conditions. However, given the extreme nonlinearity in the nature of the C-17 legislative changes (recall Table 3), the fact that macroeconomic conditions were relatively stable around the time of our analysis, and the fact that the available time series from which to estimate macro effects are quite short anyway, we believe quite strongly that the micro-accounting approach used here is in fact the more appropriate one for the question at hand.

In more detail, our analysis focuses on a comparison of the UI experiences of a one-tenth random sample of workers experiencing a job separation, as measured by the receipt of a record of employment (ROE) form in HRDC administrative data, in one of two window periods, before and

after the introduction of Bill C-17. Our first window period starts at the beginning of March 1993, and extends until the end of February 1994. Because the provisions of C-17 were phased in gradually between April and July of 1994, our second window starts in August 1994, and continues until the end of July 1995.[1] In order to control for seasonal effects on all the variables examined, which previous experience has shown can be very strong, each calendar month appears only once in each window, that is, each month is matched to a month in the other window. Some of the matches are from the year before, but others are from two years previous; this is unavoidable given the timing of the legislation. National average unemployment rates in the two windows were 11.3 and 9.8 percent respectively; thus there was a modest improvement in overall labour market conditions which we need to take into account in interpreting our results. We discuss how our micro-accounting approach is applied to these two window periods to estimate the effects of C-17 on UI eligibility, and on UI receipt, in turn, below.

2. Measuring the effect of C-17 on UI eligibility

Conceptually, our analysis of the effects of Bill C-17 on UI eligibility proceeds in three steps. First, we use the UI rules prevailing before the introduction of C-17 to compute the total weeks of UI eligibility of each of the almost 400,000 workers in our first window period (as noted earlier, this is a simple, but very nonlinear function of the worker's number of qualifying work weeks and the unemployment rate prevailing in his or her region). For any given population we are interested in (e.g. a particular industry, province, or Canada as a whole), this gives us the entire distribution of UI entitlements prevailing before Bill C-17 was implemented. It also gives us the initial distribution of workers across qualifying weeks and UI regions for any group of interest.

No behavioural change

Next, we use the above distribution of workers across qualifying-weeks and regions to compute the following counterfactual distribution: What would the entire distribution of weeks of UI eligibility be, if the new C-17 rules had been in place, but the distribution of workers across qualifying weeks and regions was the same as it was in the pre-C-17 period, and if all local unemployment rates remained at their pre-C-17

[1] Past experience suggests that large windows must be provided around policy changes like those in C-17 because of, among other things, lags in filing for UI following job separation and the possibility of "backdating" claims. The administrative lag in processing records of employment (ROEs) must also be considered. More details about the timing and construction of our sample are provided in the data appendix.

levels? This quantity gives us an indication of what effect C-17 would have in the absence of any behavioural changes in weeks of work, due either to the Bill itself or to other factors like changing macroeconomic conditions.[2]

Behavioural change in weeks of employment

Finally, we examine the distribution of workers across qualifying weeks in our "after"-C-17 window, and compute what the distribution of UI eligibility is among these workers based on their actual work experience, under the new (C-17) rules, but holding local unemployment rates fixed at the levels that prevailed in the pre-C-17 window. This gives us a measure of how the actual distribution of eligibility changed, holding constant the effect of macroeconomic conditions on UI rules, but allowing the distribution of weeks worked to change as they actually did in response to the legislation (and perhaps other influences that may affectthe distribution — e.g. macroeconomic conditions).

While the above procedure is conceptually quite simple, in practice our analysis of the effects of C-17 on UI entitlements is complicated by the following issue: there is not a one-to-one mapping between job separations, as measured by ROE's, and UI claims. This is not simply because some separations do not result in a claim, but also because workers can combine work weeks from more than one separation in order to initiate a claim for UI. As our results in this report show, this is a very important feature of the Canadian UI system that has not been given its full due in most evaluative work on the system. For our purposes here, it raises some difficulties in calculating the number of "qualifying weeks" a separating individual actually has. In practice, we use two alternative ways to measure qualifying weeks, neither of which is perfect, but each of which has advantages and disadvantages. They are described below.

Separation based approach (separation unit of analysis)

One way to define the number of qualifying weeks a workers has access to is what we call a "separation-based", or "ROE-based", approach. Each time a separation occurs, we observe how many weeks of work an individual had *in that job*. If those weeks are insufficient to qualify for the maximum duration of UI benefits in the worker's region, we then search through that individual's recent employment history for other ROE's with unused qualifying weeks. Any such weeks are added to the

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[2] It also nets out the effect of any interregional migration, but we do not believe this is a major factor in the short-run responses to C-17.

qualifying weeks in the current ROE to determine the worker's full UI eligibility. A key advantage of this ROE-based approach is that it allows us to estimate the distribution of qualifying weeks for all workers experiencing a separation, including those who never claim UI. A disadvantage is that it combines entitlement weeks from different jobs the way we think would be of maximum advantage to workers, rather than the actual way workers choose to combine ROE's, which could be different.

Claim based approach (claim unit of analysis)

A second way to define qualifying weeks is what we call a claim-based, or SV-based, approach. For each of the separations in our data which actually result in a UI claim, the administrative data tells us directly how many weeks of benefits they were actually entitled to in that claim, based on *all* the ROE's they actually used to qualify for benefits (the total number of weeks used to qualify from all ROE's together is termed the individual's "status-vector (SV) insured weeks"). The advantage of this is that it gives us the exact number of weeks each claimant actually qualified for, based on all available qualifying weeks, combined the way they actually are by real claimants and UI offices. The disadvantage of this measure is that it is not observed for non-claimants: thus if an individual did not qualify for UI under, say, the C-17 rules, we cannot ascertain from their SV-insured-weeks whether they had enough weeks to qualify for benefits under the less restrictive, pre-C-17 rules. Our ability to analyse the UI disentitlement of workers unable to accumulate the minimum number of weeks to qualify for UI at all is thus limited.

Because each has its advantages and disadvantages, we use both ROE-based, and SV-based, measures of qualifying weeks in our analysis below. Unless otherwise indicated, we use the ROE-based approach whenever we report results on a *per-separation* basis, and the SV-based approach whenever we report results on a *per-claim* basis. To the extent that the results are similar with both methods, our confidence in them will be increased.

3. Measuring the effect of C-17 on UI receipt

Our analysis of C-17's effects on UI receipt is similar in most respects to its effects on UI eligibility. As before, it is based on a micro-accounting framework that compares entire distributions of outcomes (now weeks of UI receipt) in two window periods, and develops some simple counterfactual calculations of what the Bill's impact would be in the

absence of any behavioural changes, compared to what it actually was. And again, we present results for two alternative populations (UI claims and persons). The main difference from the previous procedure — aside from the outcome measure itself — is that we are now interested in the effects of *two* different kinds of changes in economic behaviour — changes in job search, and weeks on claim among UI recipients as well as changes in the distribution of weeks worked to qualify for UI. The procedure, therefore, now has the following four steps rather than three.

Before C-17

First, for each individual in our "before" sample, we compute their total number of UI qualifying weeks, plus their actual weeks of UI claimed (which is zero if the separation did not result in a claim). For any group (e.g. province, industry or gender) of interest, this gives us the distribution of UI weeks actually received before C-17.

No behavioural change

Next, for each individual in the "before" sample who claims UI, we also compute a "truncated" weeks of benefit equal to the actual if the actual is less than that individual's entitlement (given their work history and region) under the new C-17 rules, and equal to the C-17 entitlement otherwise [i.e. Truncated = min (actual claimed, post-C-17 entitlement)]. For any population subgroup, this gives the entire distribution of UI weeks it would claim under the new, C-17 rules, if individuals altered neither their qualifying weeks of work, nor their search behaviour while on UI claim. Note that this assumes that all individuals who would previously have claimed more weeks than their "after" entitlement exhaust their UI benefits.

Behavioural change in qualifying weeks

Third, we use the distribution of qualifying weeks prevailing in our "after" C-17 sample, combined with the conditional mean, in the "pre" sample, of truncated weeks conditional on qualifying weeks, to compute a distribution of weeks of UI receipt. This distribution is what would occur if individuals changed their qualifying weeks (i.e. employment spells) to the new level in response to the legislation, but conditional on qualifying weeks, did not change their job search behaviour once on claim. It thus allows for "economic behaviour" in changing qualifying weeks but not in job search once on UI.

Behavioural change in qualifying weeks and search intensity

Finally, we look at the actual distribution of total weeks of UI claimed in our 'after" sample, to get an estimate of the total effects of Bill C-17 allowing for both kinds of behavioural responses to the Bill, some of which we argue — based on their distribution across qualifying week categories — are almost certainly induced responses to the legislative changes themselves.

4. *Results: Effects of C-17 on UI Entitlements*

In this section we estimate the effect of Bill C-17 on the number of weeks of UI benefits to which a "new" job loser, in a given province or industry, is entitled. In practice, of course, individuals do not always use all the weeks of UI to which they entitled, as they tend to find new jobs before their UI eligibility expires. The effects of C-17 on the number of weeks of UI actually claimed is examined in Section 5; however it seems clear that the number of weeks of UI workers know they can count on, given they experience a job loss, is an important quantity to them, and it is this quantity we focus on in this section.[3]

Our analysis of the effects of Bill C-17 on workers' UI entitlements is divided into three subsections. The first of these presents estimates of the distribution of eligibility losses per separation, both overall and by province, industry and gender, that would be caused by Bill C-17 if workers and firms were unable to make any behavioural adjustments to the Bill at all. The second presents evidence that some behavioural adjustments in qualifying weeks were in fact made in response to the Bill: as we shall see, some workers, especially in the Atlantic provinces, were able to accumulate enough extra weeks of work to avoid what would otherwise be quite substantial reductions in UI entitlements. The final section presents estimates of eligibility losses, by province, industry and gender, that take into account workers' (and firms') behavioural responses to the Bill. As mentioned, at various points in the section, we shall present our estimates of eligibility losses for three different "populations": per UI claim, per job separation, and per person employed in a given industry or resident in a given province.

1. Effects of Bill C-17 on UI entitlements if no behavioural changes were possible

Suppose that, after the introduction of Bill C-17, the entire distribution of ROE qualifying weeks among workers who experience a job separation remained the same in all regions of the country. Suppose also that local unemployment rates remained at exactly their pre-C-17 levels. How many fewer weeks of UI benefits would the average worker starting a UI claim,

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[3] The distinction between eligibility and receipt is analogous to that between budget constraints and consumption choices: the first summarizes the options available and the second the individual's choices given those options. In a some senses, the former could actually be considered a better indicator of the effects of the changes on individual welfare than the latter.

... there is much more variation in UI entitlements across provinces and industries after C-17 than before it.

or losing a job, be entitled to? And how does this loss vary by province, industry and gender? Answers to these questions are provided in Figure 2, and Tables 4-8. As outlined in the last section, all the numbers presented there were calculated by applying the C-17 rules to the entire distribution of qualifying weeks for each specified unit of analysis, disaggregated by province, industry and sex, in our "pre-C-17" window period, defined earlier.

Claim based unit of analysis

Eligibility levels and losses *per UI claim* are presented in Tables 4 and 5. It is worth noting that, as discussed earlier, the initial eligibility levels in these tables are calculated from the distribution of status vector insured weeks among all workers who claimed UI before Bill C-17, and that the losses ask how many fewer weeks of UI this group of workers would receive if C-17 had been applied to them. The numbers therefore include not only the eligibility losses of workers with initial insured weeks of 12 or more, but also the large losses due to the disentitlement of workers with only 10 or 11 weeks of insured employment in high-unemployment regions.

According to Tables 4 and 5, if workers were not able to make any behavioural changes to adjust to the new Bill, the average worker starting a UI claim in Canada would be entitled to about 10 fewer weeks of benefits as a result of Bill C-17. In both historical and percentage terms, this is a very large cut in the duration of benefits, amounting to slightly under one quarter of the initial mean entitlement of about 44 weeks. Surprisingly perhaps, both the pre- and post-C-17 UI entitlements of men and women are very similar; there thus appears to be very little gender differential in the impact of the Bill on individuals' UI entitlements. Tables 4 and 5 also disaggregate these overall losses by industry and province respectively. In this regard both tables share an interesting feature: *there is much more variation in UI entitlements across provinces and industries after C-17 than before it.* In fact, a reasonable summary of the two Tables could run somewhat like this: Before C-17, a average worker initiating a UI claim was entitled to a little over 40 weeks of benefits, regardless of which province he or she lived in, regardless of which industry he or she worked for, and regardless of gender. (There is some cross-industry and cross-province variation, but only one provincial number — 38.9 for women in Saskatchewan,— and only one industry number — 39.4 for men in agriculture — are below 40 weeks.) After C-17 (absent behavioural adjustment), entitlements vary much more across provinces and industries, with those provinces and industries with the least stable employment patterns (i.e. the highest fraction of workers with low ROE qualifying weeks — below 12) experiencing the biggest drops.These are the provinces

Figure 2

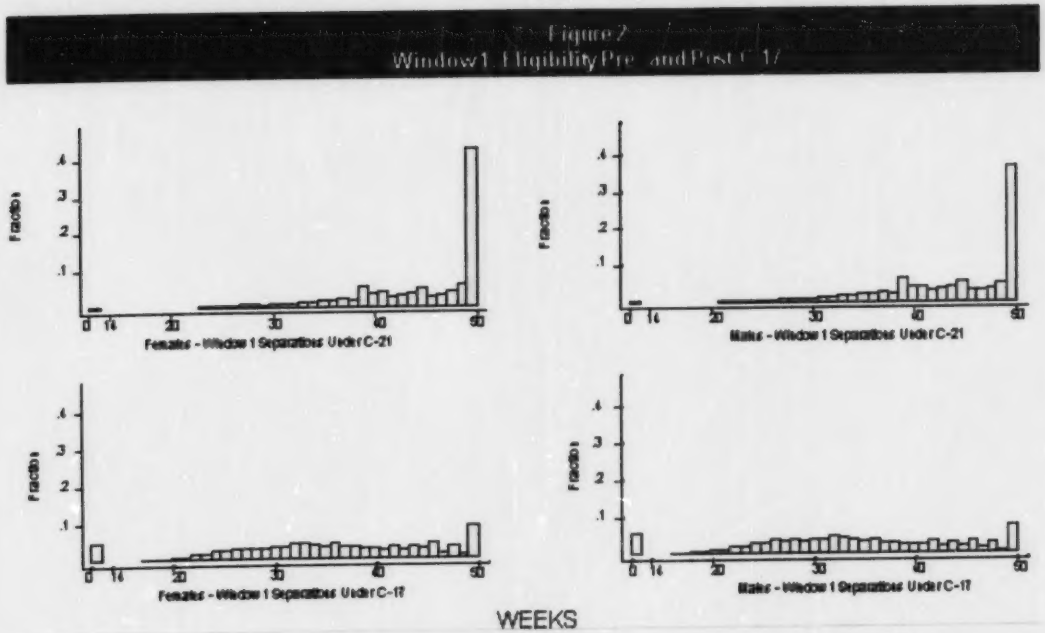
Figure 2
Window1 Eligibility Pre- and Post-UI
Fraction
Females - Window 1 Separations Under C-21
Males - Window 1 Separations Under C-21
Females - Window 1 Separations Under C-17
Males - Window 1 Separations Under C-17
WEEKS

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Table 4

(a) Women	Agric	Fish	Forest	Mines	Manu	Const	Trans	Trade	FIRE	Serv	Public	Other	Total
Before C-17	38.4	40.2	42.5	44.1	44.5	43.4	45.2	45.5	46.2	44.8	48.8	46.5	44.9
After C-17	28.5	14.1	27.0	36.5	33.8	32.2	34.8	36.3	37.9	33.9	36.1	36.7	34.7
Loss	12.8	26.0	15.5	8.8	10.7	11.2	10.8	9.2	8.3	10.7	9.5	9.8	10.2
(b) Men													
Before C-17	40.3	41.1	43.2	43.7	46.2	42.3	44.8	46.0	46.6	44.1	44.4	44.6	43.8
After C-17	27.1	16.4	27.5	35.3	35.9	30.6	34.5	35.5	35.0	33.4	33.3	34.5	33.2
Loss	13.2	24.7	15.7	8.4	9.3	11.7	10.4	9.4	9.6	10.7	11.1	10.0	10.7

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Table 5
Mean Weeks of UI Eligibility per UI Claim by Province
Assuming No Behavioural Change

	Nfld	PEI	NS	NB	Que	Ont	Man	Sask	Alta	BC	Total
(a) Women:											
Before C-17	44.7	44.8	45.2	43.6	46.3	44.9	42.6	41.2	44.7	42.7	44.9
After C-17	26.7	27.1	33.6	28.2	36.6	36.6	34.8	33.9	35.7	33.3	34.7
Loss	18.0	17.7	11.6	15.4	9.7	8.3	7.8	7.3	9.0	9.4	10.2
(b) Men:											
Before C-17	44.3	44.7	44.7	43.3	45.1	44.1	40.8	38.9	43.0	42.6	43.9
After C-17	25.6	25.8	31.8	27.5	34.7	34.9	32.6	30.5	33.0	33.0	33.2
Loss	18.7	18.9	12.9	15.8	10.4	9.2	8.2	8.4	10.0	9.6	10.7

of Newfoundland, PEI, New Brunswick and (to a lesser extent) Nova Scotia, and the industries of fishing, forestry and agriculture.[4] Workers in the fishing industry, if not able to make behavioural changes to avoid them — an issue we explore in the next subsection — would experience especially massive average losses in UI eligibility of 25 to 26 weeks due to Bill C-17. Much of this comes from those with 10 or 11 weeks of work who are completely disentitled.

Separation based unit of analysis

Tables 6 and 7 give the distribution of mean eligibility losses per job separation, also by industry and province. As mentioned, in these Tables we calculate qualifying weeks using information from individuals' ROE forms, combining them where necessary. Since not all workers experiencing a separation claim UI, the total entitlements per separation, both before and after the change, are lower. Largely because of this "scale" effect, the mean C-17-induced losses are lower too, at 7.7 weeks for women and 8.0 weeks for men. Aside from this overall difference in magnitude, the pattern of eligibility losses across industries and provinces, absent behavioural adjustment, is the same whether these losses are calculated on a per-claim, or a per-separation basis.

Person based unit of analysis (per worker and per capita)

A final perspective on the distribution of UI eligibility losses before any behavioural adjustments is provided in Table 8 and Figure 2, which in contrast to the means shown in Tables 3 to 7, show the entire distribution of eligibility losses for the country as a whole (Figure 2 shows the entire distributions of UI eligibility per separation before and after C-17; Table 8 shows the entire distribution of the difference between these two, i.e. losses). Together, Table 8 and Figure 2 show that both the initial mean entitlements, and the 10 week mean drop in entitlement shown in Tables 6 and 7, are means of distributions that are either highly asymmetric, or bimodal, or both.[5] According to Figure 2, by far the most common UI entitlement for both men and women before the introduction of Bill C-17 was the maximum one, of 50 weeks: around 40 percent of all workers starting a UI claim could count on a full 50 weeks of benefits, if they needed them. After Bill C-17, this changed dramatically, with less than 10 percent of all claimants qualifying for a full 50 weeks. Further, about 5 percent of those who would have qualified for UI before the introduction

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[4] In this study, workers in the fishing industry include all individuals in the fishing industry except self-employed owner-operators of a fishing boat, who are covered under a separate UI program.

[5] Very similar patterns are found in the distribution of losses per claim, in Tables 4 and 5.

Table 6

(a) Women	Agric	Fish	Forest	Mines	Manu	Const	Trans	Trade	FIRE	Serv	Public	Other	Total
Before C-17	30.1	35.5	27.2	35.4	34.8	34.6	34.5	33.3	36.5	32.7	36.3	29.3	34.3
After C-17	20.6	12.9	17.7	28.7	26.6	25.9	26.4	26.6	30.1	26.0	28.6	22.9	26.6
Loss	9.6	22.6	9.5	6.7	8.2	8.7	8.2	6.8	6.4	7.7	7.7	6.4	7.7
(b) Men													
Before C-17	29.8	38.1	33.5	34.3	35.1	33.3	34.7	34.3	35.7	31.4	33.7	27.8	33.6
After C-17	20.3	15.0	21.7	27.4	28.0	24.1	26.8	27.3	28.9	24.0	25.5	21.7	25.8
Loss	9.5	21.1	11.8	6.9	7.1	9.2	7.9	7.0	6.8	7.4	8.2	6.1	8.0

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Table 7
Mean Weeks of UI Eligibility per Separation by Province
Assuming No Behavioural Change

(a) Women:	Nfld	PEI	NS	NB	Que	Ont	Man	Sask	Alta	BC	Total
Before C-17	38.6	40.7	37.8	36.6	36.7	32.6	31.5	31.1	33.5	31.0	34.3
After C-17	23.2	24.8	28.2	24.1	29.0	26.1	25.3	25.6	26.7	24.2	26.6
Loss	15.4	15.9	9.6	12.5	7.7	6.5	6.2	5.5	6.8	6.8	7.7
(b) Men:											
Before C-17	38.5	40.5	37.4	36.7	36.1	32.5	30.7	29.5	29.7	30.1	33.6
After C-17	22.5	23.7	26.8	23.7	27.9	25.8	24.4	23.1	23.0	23.4	25.6
Loss	16.0	16.8	10.6	13.0	8.2	6.7	6.3	6.4	6.7	6.7	8.0

Table 8
Distribution of Weeks of Lost Eligibility: Assuming No Behavioural Change

	Women		Men	
	%	cum.%	%	cum.%
Same Eligibility:				
0	9.15	9.15	7.74	7.74
Reduced Eligibility:				
1	1.55	10.70	1.21	8.95
2	3.92	14.62	3.27	12.22
3	3.04	17.67	2.80	15.03
4	5.25	22.92	4.67	19.70
5	4.76	27.68	3.82	23.51
6	3.72	31.40	3.51	27.03
7	4.08	35.48	3.94	30.97
8	3.79	39.27	4.02	34.99
9	6.95	46.22	7.84	42.83
10	6.99	53.21	7.63	50.46
11	7.71	60.92	7.81	58.27
12	7.32	68.24	7.35	65.62
13	9.49	77.73	8.97	74.58
14	7.44	85.16	7.59	82.17
15	6.80	91.97	8.06	90.24
16	3.34	95.30	4.50	94.73
Disentitled:				
36	0.07	95.37	0.18	94.92
37	0.19	95.57	0.27	95.18
38	0.10	95.67	0.20	95.38
39	3.15	98.83	3.51	98.89
40	1.17	100.00	1.11	100.00
Total	100.00		100.00	

of C-17 would have insufficient weeks of work to qualify for UI at all under C-17, thus earning an entitlement of zero weeks. This small group of "totally disentitled" workers would experience — remember this is in the absence of any behavioural changes — a huge loss in entitlement, as is shown in Table 8. If there were no behavioural responses to Bill C-17, Table 8 shows that only 9.1 percent of women, and 7.7 percent of men starting UI claims would face no reduction in weeks of UI eligibility. A further 86.1 (95.3-9.1) percent of women and 87 percent of men would experience losses of from 1 to 16 weeks, as a result of the lower entitlements in the new law. Finally, about 5 percent of both women and men would experience massive losses as their work history would now be insufficient to qualify for UI. Thus, while we focus on mean eligibility losses in much of this paper, especially in our summaries of which provinces and industries lost most, it is important to bear in mind that these means can come from quite bimodal distributions in which a minority of workers may experience massive losses.

In sum, our analysis of what the effects of Bill C-17 would be on individuals' UI entitlements, in the absence of any behavioural responses to the Bill, shows the following. First, the mean loss in weeks of UI entitlement would be about 10 weeks per UI claim, or 8 weeks per job separation. Second, the distribution of these losses is bimodal, with the great bulk of workers experiencing losses of 1 to 16 weeks, but a small minority —those with sufficient weeks to qualify under the old rules but insufficient to qualify under the new— experiencing total UI disentitlement, with losses of 36 to 40 weeks of benefits. Third, — again before any behavioural adjustments are made — these losses are quite unevenly distributed across industries and provinces, with those provinces and industries where workers have the least stable employment histories (roughly the Atlantic provinces, and fishing, forestry and agriculture) experiencing the largest losses. The C-17 changes appear to have been designed to penalize unstable employment histories, and in this respect appear to have succeeded.

2. Behavioural changes in qualifying weeks

One way for workers and firms to mitigate the effect of the eligibility cuts documented above, on both their UI eligibility and overall financial well being, is to accumulate more qualifying weeks of work. In this subsection we explore various pieces of evidence to see whether such changes did in fact occur, where they occurred, and how big they were. We begin our analysis with Tables 9 through 12 and Figures 3 and 4, which show the distribution of work weeks that can be used to qualify for

UI before and after Bill C-17. (Figures 3 and 4 simply present in graphical form the portions of Tables 9 to 12 that apply to up to 26 weeks of work). Given the lack of a one-to one correspondence between job separations and UI claims noted in the last section, Tables 9 to 12 present three different estimates of the distribution of qualifying weeks. The counts of "all insurable week" are derived from individual ROE's, and simply report the total number of work weeks available from all ROE's. "Insurable weeks used to claim" are calculated the same way, but count only those ROE's, not aggregating short jobs, the individual eventually used to establish a UI claim.[6] Finally, "status vector insurable weeks" are derived from UI claim information, i.e. from the "status vector" file, and not from ROE's. These count the total number of work weeks (potentially from multiple ROE's) used to establish each UI claim, from which the individual's UI entitlement in that claim is calculated. Because these are based on claimants only, they only contain total weeks in excess of the minimum qualifying level before and after the policy change.

... there is a clear "spike" at the minimum number of weeks needed to qualify for UI in the highest unemployment rate regions in Canada before the introduction of Bill C-17 (10 weeks).

Tables 9 through 12, and Figures 3 and 4, show the following. First, an astonishing share (at least to us) of jobs lasting less than the minimum number of weeks needed to qualify for UI are eventually used, presumably by being combined with other jobs, to qualify for UI anyway. In window 1, the share of these "very short" jobs that eventually are used to qualify for UI is 63 percent (18.47/29.20) for women, and 79 percent (21.89/35.19) for men. Among other things, this suggests that analyses of the incentive effects of UI on employment durations that are based purely on the duration of individual jobs, such as Christofides and McKenna (1996) and Green and Riddell (1997), may be picking up only a small fraction of those effects: having a job that lasts less than minimum qualifying weeks does not, by any means, preclude one from qualifying for UI in Canada.

Second, in all three distributions examined, and for both women and men, there is a clear "spike" at the minimum number of weeks needed to qualify for UI in the highest unemployment rate regions in Canada before the introduction of Bill C-17 (10 weeks).[7] This spike is consistent with some individuals and firms having enough control over the number of weeks they work per year to accumulate exactly the minimum number of work weeks needed to establish a UI claim. Third, while it is clearly present, this spike at 10 weeks, which is an important number in terms of

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[6] Recall that ROE's for less than the minimum qualifying weeks (10 before C-17; 12 after) can still be used to establish a UI claim if they are combined with other ROE's in the same 52-week period.

[7] Of course the minimum varied across Canada according to local unemployment rates, but 10 was the lowest of these minima. Results which take this into account are presented in Figures 5 to 7 and Tables 13 to 14.

Table 9
Distributions of Insurable Weeks in Window One - Women

	All Insurable Weeks			Insurable Weeks Used To Claim			Status Vector Insurable Weeks		
	Count	%	Cum %	Count	%	Cum %	Count	%	Cum %
1	5910	4.08	4.08	1861	2.19	2.19			
2	6479	4.47	8.55	2278	2.68	4.88			
3	4954	3.42	11.97	1891	2.23	7.10			
4	4928	3.40	15.37	1783	2.10	9.21			
5	3941	2.72	18.09	1551	1.83	11.03			
6	4282	2.96	21.05	1644	1.94	12.97			
7	3854	2.66	23.71	1623	1.91	14.88			
8	4381	3.02	26.73	1611	1.90	16.78			
9	3579	2.47	29.20	1437	1.69	18.47			
10	5693	3.93	33.13	3309	3.90	22.37	2151	3.38	3.38
11	3615	2.50	35.63	1952	2.30	24.67	869	1.36	4.74
12	3994	2.76	38.38	2190	2.58	27.25	825	1.29	6.03
13	3494	2.41	40.79	1980	2.33	29.59	751	1.18	7.21
14	3782	2.61	43.40	2228	2.63	32.21	880	1.38	8.59
15	3921	2.71	46.11	2466	2.91	35.12	966	1.52	10.11
16	3798	2.62	48.73	2233	2.63	37.75	1079	1.69	11.80
17	3039	2.10	50.83	1817	2.14	39.89	968	1.52	13.32
18	2646	1.83	52.66	1518	1.79	41.68	933	1.46	14.79
19	1913	1.32	53.98	1252	1.48	43.15	813	1.28	16.06
20	3993	2.76	56.73	2721	3.21	46.36	2654	4.17	20.23
21	2139	1.48	58.21	1581	1.86	48.22	1713	2.69	22.92
22	2277	1.57	59.78	1668	1.97	50.19	1668	2.62	25.54
23	1770	1.22	61.00	1342	1.58	51.77	1368	2.15	27.68
24	2070	1.43	62.43	1514	1.78	53.55	1501	2.36	30.04
25	1762	1.22	63.65	1327	1.56	55.12	1336	2.10	32.14
26	2364	1.63	65.28	1783	2.10	57.22	1691	2.65	34.79
27	1446	1.00	66.28	1075	1.27	58.48	1127	1.77	36.56
28	1466	1.01	67.29	1041	1.23	59.71	1106	1.74	38.30
29	1207	0.83	68.12	896	1.06	60.77	1037	1.63	39.92
30	1407	0.97	69.09	1014	1.19	61.96	1132	1.78	41.70
31	1248	0.86	69.95	918	1.08	63.04	1040	1.63	43.33
32	1187	0.82	70.77	865	1.02	64.06	1038	1.63	44.96
33	1094	0.76	71.53	844	0.99	65.06	977	1.53	46.49
34	1164	0.80	72.33	876	1.03	66.09	1045	1.64	48.13
35	1275	0.88	73.21	902	1.06	67.15	1051	1.65	49.78
36	1107	0.76	73.98	821	0.97	68.12	1045	1.64	51.42
37	993	0.69	74.66	778	0.92	69.03	1043	1.64	53.06
38	1194	0.82	75.49	908	1.07	70.10	1147	1.80	54.86
39	1255	0.87	76.35	921	1.09	71.19	1337	2.10	56.96
40	1444	1.00	77.35	1086	1.28	72.47	1444	2.27	59.23
41	1330	0.92	78.27	1035	1.22	73.69	1451	2.28	61.50
42	1663	1.15	79.41	1279	1.51	75.20	1523	2.39	63.89
43	1888	1.30	80.72	1462	1.72	76.92	1763	2.77	66.66
44	2155	1.49	82.21	1639	1.93	78.85	1818	2.85	69.51
45	1414	0.98	83.18	1070	1.26	80.11	1261	1.98	71.49
46	1097	0.76	83.94	785	0.92	81.04	1044	1.64	73.13
47	899	0.62	84.56	644	0.76	81.79	952	1.49	74.63
48	1245	0.86	85.42	867	1.02	82.82	1206	1.89	76.52
49	1135	0.78	86.20	791	0.93	83.75	1408	2.21	78.73
50	1887	1.30	87.50	1318	1.55	85.30	2173	3.41	82.14
51	1832	1.26	88.77	1342	1.58	86.88	2940	4.61	86.75
52	16272	11.23	100.00	11133	13.12	100.00	8439	13.25	100.00
	144882			84870			63713		

Table 10
Distributions of Insurable Weeks in Window-Two - Women

	All Insurable Weeks			Insurable Weeks Used To Claim			Status Vector Insurable Weeks		
	Count	%	Cum %	Count	%	Cum %	Count	%	Cum %
1	5650	4.10	4.10	1381	2.00	2.00			
2	6049	4.39	8.49	1633	2.36	4.36			
3	4659	3.38	11.87	1388	2.01	6.37			
4	4730	3.43	15.30	1383	2.00	8.37			
5	3913	2.84	18.14	1286	1.86	10.23			
6	4259	3.09	21.23	1304	1.89	12.11			
7	3804	2.76	23.99	1290	1.87	13.98			
8	4409	3.20	27.19	1395	2.02	16.00			
9	3922	2.85	30.04	1394	2.02	18.01			
10	4089	2.97	33.00	1519	2.20	20.21			
11	3019	2.19	35.19	1157	1.67	21.89			
12	4769	3.46	38.65	2424	3.51	25.39	1757	3.30	3.30
13	3522	2.56	41.21	1730	2.50	27.89	782	1.47	4.76
14	3730	2.71	43.92	1818	2.63	30.52	835	1.57	6.33
15	3706	2.69	46.60	1975	2.86	33.38	703	1.32	7.65
16	3826	2.78	49.38	2062	2.98	36.36	891	1.67	9.32
17	3021	2.19	51.57	1706	2.47	38.83	854	1.60	10.92
18	2736	1.99	53.56	1414	2.05	40.88	804	1.51	12.43
19	1946	1.41	54.97	1076	1.56	42.43	729	1.37	13.80
20	3730	2.71	57.68	2301	3.33	45.76	2257	4.23	18.03
21	2051	1.49	59.16	1344	1.94	47.71	1358	2.55	20.58
22	2317	1.68	60.85	1438	2.08	49.79	1404	2.63	23.21
23	1732	1.26	62.10	1130	1.63	51.42	1147	2.15	25.36
24	1873	1.36	63.46	1144	1.65	53.07	1200	2.25	27.62
25	1510	1.10	64.56	958	1.39	54.46	1064	2.00	29.61
26	2244	1.63	66.18	1472	2.13	56.59	1426	2.68	32.29
27	1428	1.04	67.22	930	1.35	57.93	969	1.82	34.10
28	1447	1.05	68.27	901	1.30	59.24	956	1.79	35.90
29	1129	0.82	69.09	738	1.07	60.31	892	1.67	37.57
30	1327	0.96	70.05	862	1.25	61.55	958	1.80	39.37
31	1147	0.83	70.89	735	1.06	62.62	897	1.68	41.05
32	1207	0.88	71.76	770	1.11	63.73	947	1.78	42.83
33	1053	0.76	72.53	699	1.01	64.74	870	1.63	44.46
34	1110	0.81	73.33	757	1.09	65.84	924	1.73	46.19
35	1308	0.95	74.28	794	1.15	66.98	914	1.71	47.91
36	1077	0.78	75.06	699	1.01	68.00	937	1.76	49.67
37	896	0.65	75.71	623	0.90	68.90	875	1.64	51.31
38	1177	0.85	76.57	775	1.12	70.02	1060	1.99	53.30
39	1147	0.83	77.40	781	1.13	71.15	1123	2.11	55.40
40	1384	1.00	78.40	915	1.32	72.47	1317	2.47	57.87
41	1205	0.87	79.28	807	1.17	73.64	1186	2.22	60.10
42	1386	1.01	80.28	932	1.35	74.99	1289	2.42	62.52
43	2018	1.46	81.75	1422	2.06	77.04	1760	3.30	65.82
44	2069	1.50	83.25	1389	2.01	79.05	1615	3.03	68.85
45	1416	1.03	84.27	960	1.39	80.44	1205	2.26	71.11
46	1036	0.75	85.03	669	0.97	81.41	883	1.66	72.76
47	867	0.63	85.66	572	0.83	82.24	828	1.55	74.32
48	1088	0.79	86.44	688	1.00	83.23	973	1.83	76.14
49	991	0.72	87.16	641	0.93	84.16	1101	2.07	78.21
50	1683	1.22	88.38	1077	1.56	85.72	1701	3.19	81.40
51	1716	1.25	89.63	1120	1.62	87.34	2208	4.14	85.54
52	14292	10.37	100.00	8755	12.66	100.00	7707	14.46	100.00
	137820			69133			53306		

Table 11
Distributions of Insurable Weeks in Window One - Men

	All Insurable Weeks			Insurable Weeks Used To Claim			Status Vector Insurable Weeks		
	Count	%	Cum %	Count	%	Cum %	Count	%	Cum %
1	15836	6.73	6.73	7002	4.92	4.92			
2	15400	6.54	13.28	7103	4.99	9.90			
3	11884	5.05	18.33	5691	3.99	13.90			
4	10764	4.57	22.90	5281	3.71	17.60			
5	8842	3.76	26.66	4349	3.05	20.66			
6	8460	3.60	30.25	4086	2.87	23.52			
7	7435	3.16	33.41	3912	2.75	26.27			
8	7414	3.15	36.56	3520	2.47	28.74			
9	6310	2.68	39.25	3201	2.25	30.99			
10	8592	3.65	42.90	5450	3.83	34.81	3668	3.79	3.79
11	5790	2.46	45.36	3465	2.43	37.25	1471	1.52	5.32
12	5920	2.52	47.87	3444	2.42	39.66	1604	1.66	6.98
13	5039	2.14	50.02	3037	2.13	41.80	1401	1.45	8.43
14	4980	2.12	52.13	3014	2.12	43.91	1715	1.77	10.20
15	5025	2.14	54.27	3200	2.25	46.16	1809	1.87	12.07
16	5152	2.19	56.46	3181	2.23	48.39	2023	2.09	14.16
17	4403	1.87	58.33	2777	1.95	50.34	1951	2.02	16.18
18	4161	1.77	60.10	2663	1.87	52.21	2078	2.15	18.33
19	3196	1.36	61.45	2169	1.52	53.73	1766	1.83	20.16
20	6186	2.63	64.08	4470	3.14	56.87	4428	4.58	24.74
21	3434	1.46	65.54	2640	1.85	58.72	3050	3.16	27.90
22	3623	1.54	67.08	2730	1.92	60.64	3017	3.12	31.02
23	2858	1.21	68.30	2242	1.57	62.21	2490	2.58	33.59
24	3213	1.37	69.66	2386	1.67	63.89	2675	2.77	36.36
25	2804	1.19	70.85	2184	1.53	65.42	2412	2.50	38.86
26	3434	1.46	72.31	2654	1.86	67.28	2826	2.92	41.78
27	2481	1.05	73.37	1941	1.36	68.65	2200	2.28	44.06
28	2717	1.15	74.52	2091	1.47	70.11	2341	2.42	46.48
29	2191	0.93	75.45	1710	1.20	71.31	2034	2.10	48.58
30	2318	0.99	76.44	1746	1.23	72.54	2144	2.22	50.80
31	1987	0.84	77.28	1517	1.06	73.60	1886	1.95	52.75
32	1996	0.85	78.13	1548	1.09	74.69	1934	2.00	54.75
33	1783	0.76	78.89	1397	0.98	75.67	1777	1.84	56.59
34	1738	0.74	79.63	1330	0.93	76.61	1683	1.74	58.33
35	1875	0.80	80.43	1386	0.97	77.58	1719	1.78	60.11
36	1504	0.64	81.06	1118	0.78	78.36	1513	1.57	61.68
37	1456	0.62	81.68	1117	0.78	79.15	1536	1.59	63.27
38	1365	0.58	82.26	1053	0.74	79.89	1517	1.57	64.84
39	1359	0.58	82.84	1013	0.71	80.60	1400	1.45	66.29
40	1481	0.63	83.47	1141	0.80	81.40	1594	1.65	67.93
41	1154	0.49	83.96	872	0.61	82.01	1323	1.37	69.30
42	1430	0.61	84.57	1052	0.74	82.75	1465	1.52	70.82
43	1284	0.55	85.11	926	0.65	83.40	1385	1.43	72.25
44	1468	0.62	85.74	1063	0.75	84.15	1431	1.48	73.73
45	1111	0.47	86.21	847	0.59	84.74	1272	1.32	75.05
46	1183	0.50	86.71	854	0.60	85.34	1340	1.39	76.43
47	1138	0.48	87.20	824	0.58	85.92	1372	1.42	77.85
48	1522	0.65	87.84	1069	0.75	86.67	1621	1.68	79.53
49	1372	0.58	88.43	992	0.70	87.36	1856	1.92	81.45
50	2274	0.97	89.39	1567	1.10	88.46	2818	2.92	84.37
51	2740	1.16	90.56	1889	1.33	89.79	4015	4.15	88.52
52	22217	9.44	100.00	14544	10.21	100.00	11095	11.48	100.00
	235299			142458			96655		

Table 12
Distributions of Insurable Weeks in Window Two - Men

	All Insurable Weeks			Insurable Weeks Used To Claim			Status Vector Insurable Weeks		
	Count	%	Cum %	Count	%	Cum %	Count	%	Cum %
1	15823	7.07	7.07	5260	4.76	4.76			
2	14433	6.45	13.51	5083	4.60	9.35			
3	10647	4.75	18.27	4096	3.70	13.06			
4	10095	4.51	22.78	3644	3.30	16.35			
5	8129	3.63	26.41	3194	2.89	19.24			
6	8162	3.65	30.05	3004	2.72	21.96			
7	6761	3.02	33.07	2651	2.40	24.35			
8	7131	3.18	36.26	2765	2.50	26.85			
9	6056	2.70	38.96	2488	2.25	29.10			
10	5926	2.65	41.61	2518	2.28	31.38			
11	4971	2.22	43.83	2197	1.99	33.37			
12	7036	3.14	46.97	3674	3.32	36.69	2679	3.42	3.42
13	5313	2.37	49.34	2728	2.47	39.16	1313	1.67	5.09
14	4921	2.20	51.54	2472	2.24	41.39	1286	1.64	6.73
15	4431	1.98	53.52	2298	2.08	43.47	1221	1.56	8.29
16	4911	2.19	55.71	2564	2.32	45.79	1564	1.99	10.28
17	4149	1.85	57.56	2252	2.04	47.82	1512	1.93	12.21
18	4296	1.92	59.48	2290	2.07	49.89	1619	2.06	14.27
19	3108	1.39	60.87	1812	1.64	51.53	1400	1.78	16.06
20	5767	2.58	63.45	3404	3.08	54.61	3758	4.79	20.85
21	3523	1.57	65.02	2209	2.00	56.61	2475	3.16	24.00
22	3638	1.62	66.64	2208	2.00	58.61	2394	3.05	27.05
23	2799	1.25	67.89	1795	1.62	60.23	2189	2.79	29.84
24	3001	1.34	69.24	1820	1.65	61.87	2087	2.66	32.51
25	2759	1.23	70.47	1703	1.54	63.41	1926	2.46	34.96
26	3333	1.49	71.96	2031	1.84	65.25	2239	2.85	37.82
27	2460	1.10	73.05	1462	1.32	66.57	1774	2.26	40.08
28	2581	1.15	74.21	1478	1.34	67.91	1851	2.36	42.44
29	2123	0.95	75.16	1262	1.14	69.05	1673	2.13	44.57
30	2388	1.07	76.22	1455	1.32	70.37	1724	2.20	46.77
31	2126	0.95	77.17	1331	1.20	71.57	1562	1.99	48.76
32	2105	0.94	78.11	1280	1.16	72.73	1626	2.07	50.83
33	1809	0.81	78.92	1176	1.06	73.79	1596	2.03	52.87
34	1801	0.80	79.72	1135	1.03	74.82	1518	1.94	54.80
35	1977	0.88	80.61	1188	1.07	75.89	1558	1.99	56.79
36	1691	0.76	81.36	1109	1.00	76.89	1461	1.86	58.65
37	1425	0.64	82.00	985	0.89	77.78	1345	1.71	60.37
38	1448	0.65	82.64	980	0.89	78.67	1363	1.74	62.10
39	1461	0.65	83.30	995	0.90	79.57	1408	1.80	63.90
40	1497	0.67	83.97	978	0.88	80.45	1481	1.89	65.79
41	1166	0.52	84.49	786	0.71	81.17	1210	1.54	67.33
42	1310	0.59	85.07	850	0.77	81.93	1246	1.59	68.92
43	1287	0.57	85.65	848	0.77	82.70	1278	1.63	70.55
44	1374	0.61	86.26	888	0.80	83.50	1279	1.63	72.18
45	1147	0.51	86.77	762	0.69	84.19	1158	1.48	73.65
46	1134	0.51	87.28	727	0.66	84.85	1146	1.46	75.11
47	1051	0.47	87.75	720	0.65	85.50	1214	1.55	76.66
48	1400	0.63	88.37	900	0.81	86.32	1364	1.74	78.40
49	1397	0.62	89.00	941	0.85	87.17	1639	2.09	80.49
50	2260	1.01	90.01	1388	1.26	88.42	2481	3.16	83.65
51	2743	1.23	91.23	1725	1.56	89.98	3219	4.10	87.76
52	19634	8.77	100.00	11080	10.02	100.00	9603	12.24	100.00
	223914			110589			78439		

Figure 3

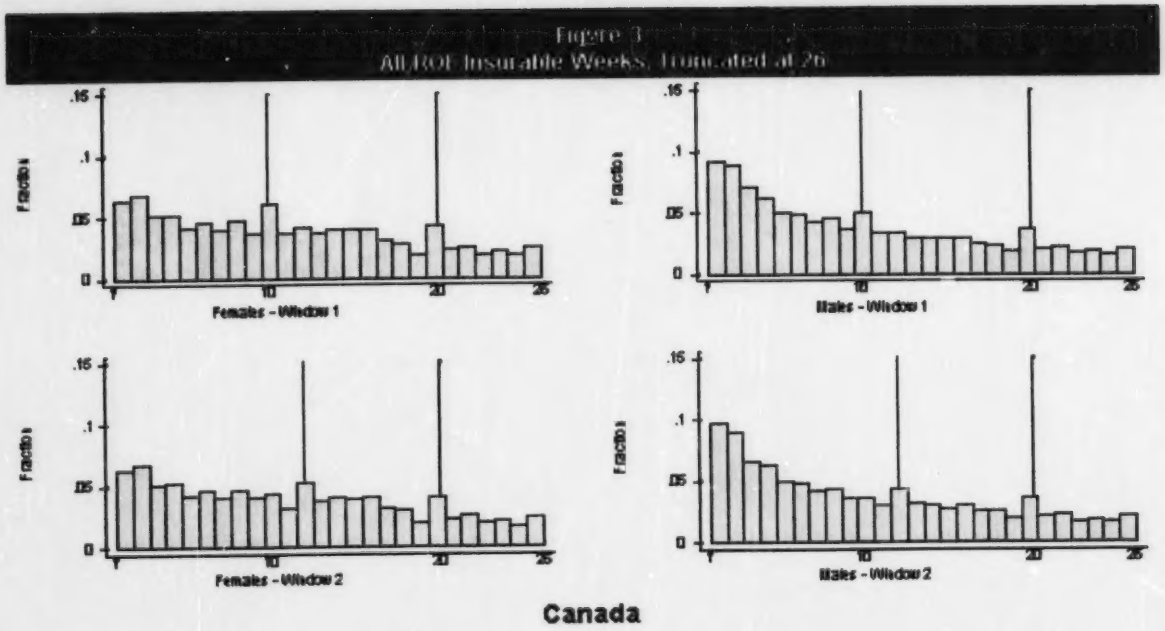

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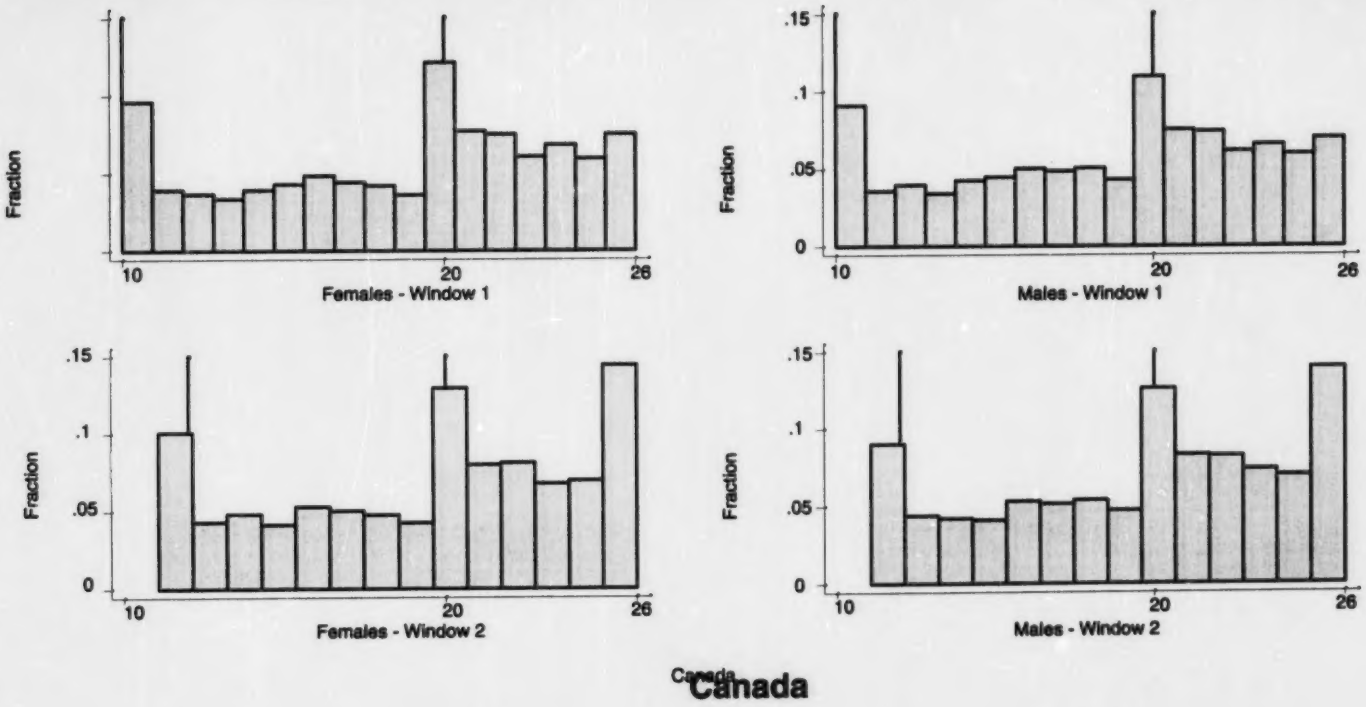
Figure 4
Claimant's SV Insurable Weeks, Truncated at 26



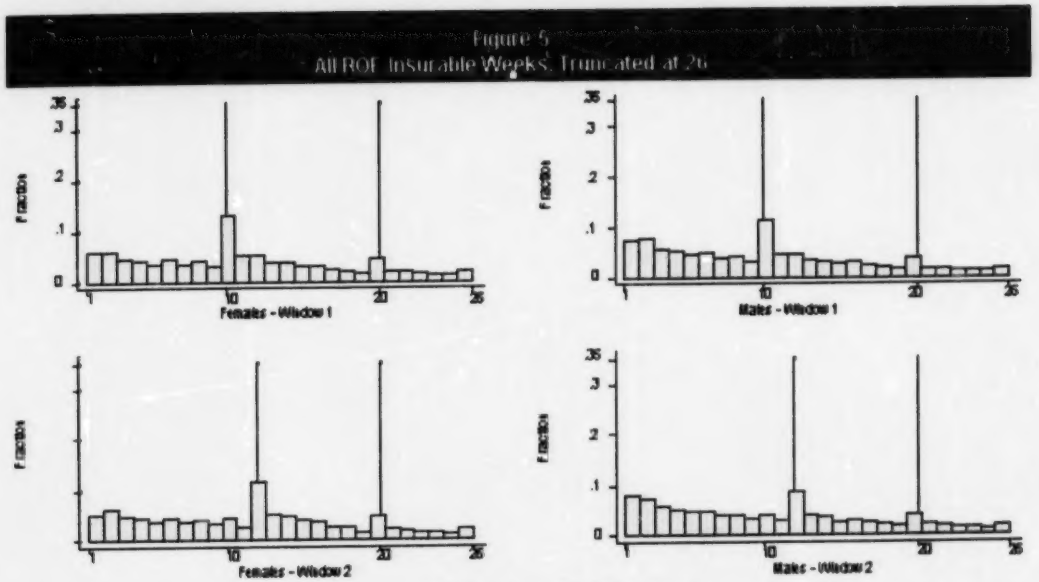
... some individuals were able to alter their distribution of qualifying weeks in response to the legislation, in a way that would mitigate, the effect of the C-17 cuts on their UI eligibility. While this number is small on a national level, it may be significant in particular provinces and industries ...

the UI system only for those Canadian workers in UI regions where the local (3 month moving average seasonally adjusted) unemployment rate is greater than 15 percent, does not represent a large fraction of the Canadian labour force as a whole. Focusing for example on women's SV insured weeks in Table 9 (none of the other cases are very different), only 3.4 percent of all UI claims nationwide are established with just the minimum number of weeks needed to qualify in high-unemployment regions (10 weeks). Only about 14-16 per cent were established with fewer than 20 SV insured weeks, which was the highest possible minimum qualifying weeks, for regions with unemployment rates below 6 percent. (In the period in question the regional three month moving average seasonally adjusted unemployment rates used to administer the UI system ranged from below 6 percent to over substantially 16 percent). Fourth, while this spike is small, it does move when the UI system changes, exactly as predicted by a simple incentive argument: after the introduction of Bill C-17, the spike is found at 12 weeks, the new qualifying minimum, rather than 10 as before. Both clearly show a small spike at 10 weeks before the introduction of Bill C-17, which moves to 12 weeks after C-17. Interestingly there also appears to be a robust spike at 20 weeks, which does not move when the legislation changes.

Together, we take Tables 9 to 12 and Figures 3 to 4 as evidence that some individuals are able to alter their distribution of qualifying weeks in response to the legislation, in a way that would mitigate the effect of the C-17 cuts on their UI eligibility. While this number appears to be small on a national level, it may be significant in particular provinces and industries, an issue turn to now. To address this issue, Figures 5 to 7 focus on UI regions where the unemployment rate was greater than 14 percent. It is only in those regions where the minimum qualifying weeks rose from 10 to 12 as a result of Bill C-17. Clearly the spike is now bigger, and moves much more clearly when the legislation changes.

The issue of exactly where behavioural changes in minimum weeks of work are likely to be most important is pursued in even more detail in Tables 13 and 14. These Tables give distributions of status vector insured weeks (the total number of weeks on which UI claims are based, observed for UI claimants only, which can result from a combination of more than one job, or ROE), relative to the minimum number of weeks needed to qualify for unemployment insurance (which varies across UI regions according to the local unemployment rate). A value of zero thus indicates that the individual had exactly the minimum number of weeks needed to qualify for UI; positive values indicate more than the minimum number of weeks. The tables compare two high-unemployment regions: Newfoundland, and Northern Ontario (UI region 44). In Newfoundland, the tailoring of work histories to qualify for UI is obvious, both before and after Bill

Figure 5



Regions with UR > 14%

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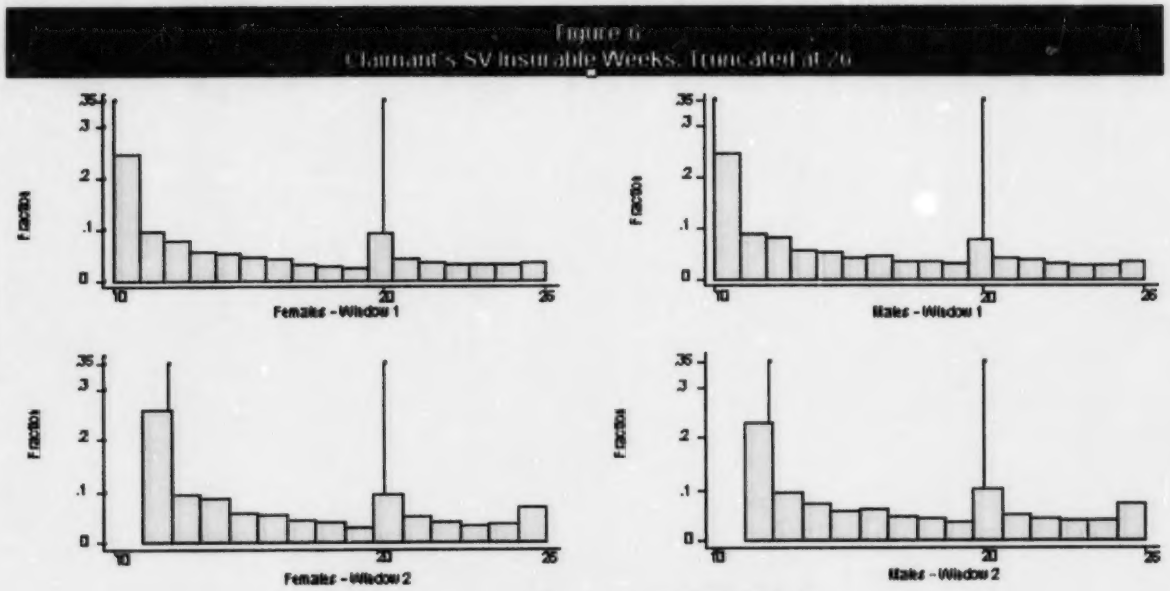
Figure 6



Regions with UR > 14%

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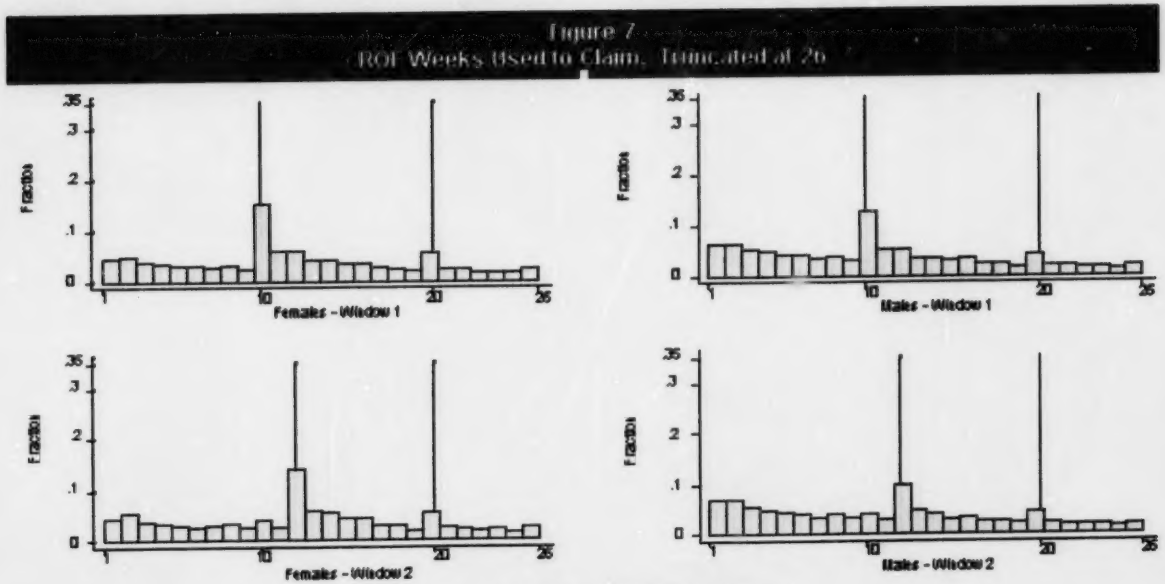
Figure 7



Regions with UR > 14%

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Table 13
Newfoundland's Distribution of the Excess of Weeks Worked compared to the Minimum Required by the Entrance Requirement (zero indicates no excess over the minimum required)

	Females		Males	
	Pre-C-17	Post-C-17	Pre-C-17	Post-C-17
0	25.68	19.75	26.35	19.09
1	7.76	6.86	7.70	7.30
2	4.81	5.30	5.08	4.59
3	3.13	3.17	4.28	3.79
4	2.66	2.78	3.70	4.04
5	2.60	2.43	2.84	2.91
6	1.95	2.43	3.32	3.04
7	1.92	1.91	2.66	2.27
8	1.83	4.17	2.16	6.03
9	1.33	2.78	2.40	3.38
10	5.93	2.00	4.76	2.41
11	2.36	1.87	2.60	2.10
12	1.77	1.56	2.32	1.96
13	1.21	1.87	1.66	1.33
14	1.65	2.08	1.44	2.13
15	1.51	1.74	1.62	1.69
16	1.33	1.43	1.26	1.55
17	1.03	1.39	1.38	1.72
18	0.91	1.52	1.40	1.49
19	0.80	1.35	1.30	1.25
20	0.74	1.35	1.12	1.44
21	1.15	1.04	1.10	1.13
22	0.71	0.95	0.78	1.13
23	0.94	1.04	0.98	1.22
24	0.94	1.09	0.94	1.25
25	0.91	0.91	0.70	1.30
26	0.80	1.35	0.72	0.72
27	1.03	1.04	0.82	0.97
28	1.24	2.13	0.74	1.00
29	1.80	1.39	0.64	0.75
30	1.33	1.65	0.58	1.27
31	1.03	1.09	0.64	0.69
32	1.30	1.56	1.06	0.75
33	0.77	0.95	0.68	0.94
34	1.21	0.78	0.42	0.64
35	0.62	0.74	0.32	0.89
36	0.56	0.95	0.32	0.44
37	0.71	1.13	0.62	1.38
38	1.09	2.04	0.82	1.96
39	1.56	2.69	1.00	1.77
40	1.48	5.77	1.24	4.29
41	1.83	--	0.92	--
42	4.07	--	2.60	--
	100.00	100.00	100.00	100.00

Table 14
Northern Ontario's Distribution of the Excess of Weeks Worked Compared to the Minimum Required by the Entrance Requirement
(zero indicates no excess over the minimum required)

	Females		Males	
	Pre-C-17	Post-C-17	Pre-C-17	Post-C-17
0	1.12	1.67	2.87	2.74
1	0.84	0.96	1.84	3.53
2	1.31	1.79	1.89	2.52
3	1.68	0.72	1.52	2.30
4	2.05	1.32	2.16	2.09
5	1.40	1.32	2.16	2.45
6	1.40	1.67	2.76	2.45
7	1.21	1.32	1.57	1.66
8	0.56	3.95	2.33	5.11
9	2.24	3.95	2.49	2.52
10	4.48	3.47	4.11	3.82
11	2.89	2.27	3.08	4.25
12	4.01	3.35	4.11	3.74
13	2.33	2.03	3.19	3.38
14	2.24	2.87	3.08	2.30
15	1.77	1.56	3.03	1.87
16	2.61	1.67	2.92	2.30
17	1.59	0.72	2.65	1.73
18	2.33	2.03	2.98	2.88
19	1.40	1.44	1.95	1.80
20	1.49	2.03	1.84	2.23
21	1.77	2.27	2.11	2.52
22	1.77	1.32	2.38	1.87
23	2.80	1.32	1.52	2.02
24	1.12	1.56	1.62	1.73
25	1.21	2.87	1.46	1.87
26	2.05	2.15	1.24	1.94
27	1.68	3.35	1.62	1.15
28	2.99	3.83	1.84	1.94
29	3.08	2.87	1.41	1.37
30	3.17	2.99	1.57	1.30
31	2.80	4.31	1.41	1.30
32	3.08	4.07	0.97	1.37
33	3.64	1.56	1.41	1.01
34	0.93	1.32	1.03	0.94
35	0.84	1.44	0.76	1.01
36	1.21	1.44	1.24	1.15
37	1.49	1.56	1.68	1.51
38	2.52	2.27	1.30	2.95
39	2.33	3.95	1.89	4.46
40	1.77	11.48	2.54	8.93
41	5.51	--	4.92	--
42	11.20	--	9.52	--
	100.00	100.00	100.00	100.00

... while high unemployment, and employment in primary industries are important factors, they are not sufficient to explain the tailoring of work histories to the UI system in the Atlantic provinces ... other factors, among them learning effects and the possibility of a "culture of unemployment" must play a role as well.

C-17: Before the Bill, fully 26 percent of UI claims established in Newfoundland by both men and women were established on the basis of the minimum possible number of weeks of work. This fraction dropped somewhat, to 18-19 percent after C-17, suggesting that not all of those 26 percent were able to find the extra 2 weeks of work needed to qualify for UI. However, the continued existence of a spike at the new, higher level of qualifying weeks after C-17 suggests that behavioural changes in response to C-17 could have substantially mitigated the effects of this Bill on workers' UI entitlements in that province.

Table 14 presents the exact same statistics for the highest-unemployment region in Ontario, UI region 44. Interestingly, during the sample period, the overall unemployment rate in UI region 44 (pre-C-17 the UI regional unemployment rate ranged from 14.3 percent to 16.4 percent; post-C-17 it was between 13.3 percent to 14.6 percent, only in the last month of the period did the regional rate dip below 14 percent) was not that different from that in Newfoundland (pre-C-17 the 3 regions unemployment rates were between 12.7 percent to 27.5 percent; post-C-17 from 11.7 percent to 27.4 percent) in terms of the ranges used in the operation of the UI system. Incredibly, however, the spike seen in Newfoundland is totally absent.[8] We conclude that, while high unemployment, and employment in primary industries are important factors, they are not sufficient to explain the tailoring of work histories to the UI system in the Atlantic provinces, especially Newfoundland. Other factors, among them learning effects and the possibility of a "culture of unemployment" must play a role as well. These factors may play an important role in modifying the incidence of Bill C-17, relative to what would occur if no behavioural changes were possible, an issue we turn to now.

3. Estimated effects on UI eligibility allowing for behavioural responses in weeks worked

While legislation-induced behavioural changes in qualifying weeks may not be of great importance on the national level, the previous subsection showed that they may be quite important in particular provinces and industries, especially those which are high users of the UI system. The ability of workers to make such behavioural changes could thus have important effects on the pattern of C-17-induced eligibility losses across provinces and industries. To examine that possibility, in this section we present estimates of the incidence of Bill C-17 that incorporate the mitigating effects of these behavioural changes. Tables 15 to 18 present

[8] The spike is also, less surprisingly, absent for Ontario as a whole.

parallel results to those in Tables 5 to 8, which now allow for workers to change their qualifying weeks in response to Bill C-17. In all these Tables, the "post-C-17" numbers were calculated by applying the C-17 rules to the distribution of qualifying weeks that prevailed after Bill C-17 rather than before it, but using the pre-C-17 unemployment rates to make the numbers comparable. Tables 15 and 16 present losses per UI claim, Tables 17 and 18 losses per job separation.

Claim based unit of analysis

In interpreting Tables 15 and 16, it is important to note that, because they use the "after" distribution of SV insured weeks, the "after" results in these Tables — unlike those in 17 and 18 below or in Tables 5 and 6 — should be interpreted as conditional on claiming UI after the introduction of C-17. Our calculations of the losses in these two tables therefore include reductions in UI entitlements among all individuals who would claim under both legislative regimes, but do not include losses due to the total disentitlement of individuals who would have claimed before C-17.[9] They are therefore not directly comparable to Tables 5 and 6, which do include such effects, but they do show the following: even allowing for individuals to change their work behaviour in an environment of modestly improving economic conditions (which should have made it easier to accumulate more qualifying weeks) Bill C-17 still caused the eligibility in average UI claim to fall by about 8 to 8.2 weeks.[10]

---

[9] This is an inevitable feature of the fact that SV insured weeks are observed for UI claimants only, and needs to be kept in mind whenever the post-C-17 distribution of SV insured weeks is used,

[10] Recall that we control for seasonal effects by matching months in the two windows. We control for the effects of changing macroeconomic conditions on UI rules by calculating eligibility in each UI region at the unemployment rate that prevailed in the pre-C-17 window. Improving macroeconomic conditions could however still account for some of the increase in qualifying weeks between the pre- and post periods.

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Table 15

(a) Women	Agric	Fish	Forest	Mines	Manu	Const	Trans	Trade	FIRE	Serv	Public	Other	Total
Before C-17	39.4	40.2	42.5	44.1	44.5	43.4	45.2	46.5	46.2	44.8	45.6	45.5	44.9
After C-17	29.4	32.3	33.8	36.5	36.5	35.1	35.9	37.6	38.7	36.0	37.3	37.2	36.6
Loss	10.0	7.9	8.9	7.6	8.0	8.3	9.3	7.9	8.5	8.8	8.3	8.3	8.3
(b) Men													
Before C-17	40.3	41.1	43.2	43.7	45.2	42.5	44.9	45.0	45.5	44.1	44.4	44.5	43.9
After C-17	31.1	32.4	34.4	34.2	37.6	33.0	36.2	37.7	37.7	35.9	36.2	35.9	35.4
Loss	9.2	8.7	8.8	9.6	7.5	9.3	8.7	7.3	7.8	8.8	8.2	8.6	8.5

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Table 16
Mean Weeks of UI Eligibility per UI Claim, by Province
Assuming a Behavioural Change in Weeks of Employment

(a) Women:	Nfld	PEI	NS	NB	Que	Ont	Man	Sask	Alta	BC	Total
Before C-17	44.7	44.8	45.2	43.6	46.3	44.9	42.6	41.2	44.7	42.7	44.9
After C-17	37.9	37.4	36.7	35.8	38.1	36.4	35.3	33.8	36.4	33.8	36.6
Loss	6.8	7.4	8.5	7.8	8.2	8.5	7.4	7.4	8.3	9.0	8.3
(b) Men:											
Before C-17	44.3	44.7	44.7	43.3	45.1	44.1	40.8	38.9	43.0	42.6	43.9
After C-17	37.0	37.2	36.1	35.1	37.0	35.5	33.2	31.4	33.6	33.3	35.4
Loss	7.3	7.5	8.6	8.2	8.1	8.6	7.7	7.5	9.5	9.3	8.5

Table 17

	Agric	Fish	Forest	Mines	Manu	Const	Trans	Trade	FIRE	Serv	Public	Other	Total
(a) Women:													
Before C-17	30.1	35.5	27.2	35.4	34.8	34.8	34.8	33.3	38.5	32.7	38.3	29.3	34.5
After C-17	29.6	25.2	20.5	27.8	27.5	28.8	26.8	25.5	30.4	25.2	29.0	23.5	26.7
Loss	0.5	10.3	6.7	7.6	7.3	6.1	8.0	7.8	8.1	7.5	7.4	5.8	7.8
(b) Men:													
Before C-17	29.8	38.1	33.5	34.3	35.1	33.3	34.7	34.3	35.7	31.4	33.7	27.8	33.6
After C-17	21.5	28.2	25.9	26.3	28.4	25.0	27.6	27.5	28.9	23.9	26.6	22.2	26.0
Loss	8.3	9.8	7.6	8.0	6.7	8.3	7.1	6.8	6.8	7.5	7.1	5.6	7.6

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Table 18
Mean Weeks of UI Eligibility per Separation, by Province
Allowing for a Behavioural change in Weeks worked

(a) Women:	Nfld	PEI	NS	NB	Que	Ont	Man	Sask	Alta	BC	Total
Before C-17	38.6	40.7	37.8	36.6	36.7	32.6	31.5	31.1	33.5	31.0	34.3
After C-17	30.9	32.2	28.9	28.7	29.1	25.3	24.9	24.0	26.0	24.1	26.7
Loss	7.7	8.6	8.9	7.9	7.7	7.3	6.6	7.1	7.5	6.9	7.6
(b) Men:											
Before C-17	38.5	40.5	37.4	36.7	36.1	32.5	30.7	29.5	29.7	30.1	33.6
After C-17	30.7	31.0	28.5	28.7	28.6	25.2	24.0	22.9	22.8	22.9	26.0
Loss	7.8	9.5	8.9	8.0	7.5	7.3	6.7	6.6	6.9	7.3	7.6

... the losses are much more evenly distributed across provinces and industries when behavioural changes are accounted for than when they are not.

Tables 15 and 16 also share another interesting feature, which is the distribution of eligibility losses across provinces and industries. Unlike Tables 5 and 6, which showed much larger eligibility losses in the Atlantic provinces, and in the fishing, forestry and agricultural industries, the losses are now much more evenly spread across provinces and industries. What this implies is that either almost all of the excess eligibility loss in high-unemployment provinces and industries takes the form of failure to accumulate enough weeks to qualify for UI at all (a factor which is not captured by Tables 15 and 16) or that workers in those provinces were able to make behavioural adjustments in their qualifying weeks of work that largely eliminated the disproportionate effects of Bill C-17 on their UI eligibility. To sort out these issues, we now turn to the distribution of eligibility losses per job separation.

Separation based unit of analysis

Tables 17 and 18 present the same kind of results as in Tables 15 and 16, but on a per-separation basis. As in Tables 7 and 8 these were calculated from the distributions of ROE weeks, rather than the distributions of status vector insured weeks. Because they condition only on separating from a job and not on actually claiming UI they are directly comparable to their "no behavioural change" counterparts in Tables 7 and 8, and they do incorporate eligibility losses due to a failure to qualify for any UI at all. As suggested by Tables 15 and 16 however, the losses are much more evenly distributed across provinces and industries when behavioural changes are accounted for than when they are not. For example (from Table 7), absent incentive effects on weeks of work, the average job loser in Newfoundland would have lost almost 16 weeks of UI entitlement, more than twice the national average. Once the ability of workers to find extra weeks of work to mitigate the effects of C-17 is taken into account, their losses become essentially equal to the national average of 7.6 weeks.[11] While behavioural changes in weeks of work are of limited importance nationwide, we conclude that they can be of major importance in certain regions, and can substantially alter our estimates of who is most hurt by the eligibility cuts in recent UI legislation. In particular, when workers' and firms' efforts to find extra weeks of work to mitigate the C-17-induced cuts are taken into account, the average entitlement loss per job separation after C-17 is not much different in high-unemployment provinces and industries than other provinces and industries. This finding coincides with the observation in the previous subsection

[11] This dramatic effect on the provincial pattern of losses, of using the post-C-17 distribution of insured weeks rather than the pre-C-17 distribution, is highly unlikely to be an artifact of changing macroeconomic conditions between the pre- and post periods. That could only be the case if macro conditions improved much more rapidly in the Atlantic provinces than elsewhere, which was patently not the case.

that behavioural changes in response to the legislation were much more pronounced in Newfoundland than in other parts of Canada.[12]

Person based unit of analysis (per worker or per capita)

Tables 19 through 22 present a final perspective on the provincial, industrial, and gender distribution of UI eligibility losses engendered by Bill C-17, by expressing these losses in per-worker, or per-capita terms, rather than per job separation or per UI claim. Rather than asking how much the UI eligibility of an average job loser or UI claimant falls, these tables ask the following question: "Given you are employed in a particular industry, or live in a particular province, how many fewer weeks of UI are you likely to become entitled to in a given year as a result of a job loss?" If job losses are more common in certain industries or provinces, workers in those industries or provinces are likely to be hurt more by C-17 simply because they are more likely to lose their jobs in a given year, even if their eligibility losses, conditional on a job loss, are no different from workers elsewhere. The numbers in Tables 19 and 20 are calculated from the "per claim" numbers in Tables 15 and 16, using the ratio of claims per industry in our HRDC data to that of employment by industry in Statistics Canada's Labour Force Survey data for 1993, and the ratio of claims per province to 1993 counts of population.[13]

Even though, from our previous results, we know that a separating worker could expect roughly the same UI eligibility in all industries before C-17, Table 19 clearly shows that certain industries were still much higher users of the UI system than others because of their much higher separation rates.These high-use industries include construction, fishing and foresty. Interestingly, both before and after C-17, fishing shows extremely high UI use for women (we conjecture many of these are fish plant workers) but not for men, while the opposite is true for construction. Because job loss still a relatively rare event nationwide, Table 19 also shows that the average employed worker lost only about a week of UI entitlement due to Bill C-17. Because certain industries rely much more on layoffs and

... the average employed worker lost only about a week of UI entitlement due to Bill C-17. Because certain industries rely much more on layoffs and UI system, however, workers in those industries lost as much as five times as much, even when behavioural changes are taken into account.

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12 Some of what we are labelling behavioural effects, at least in the special cases of Newfoundland and the fishing industry, may reflect the impact of government "make-work" programs, such as the Atlantic Groundfish Strategy (TAGS), some of which were specifically designed to provide workers with enough employment to qualify for UI. While it is debatable whether these represent "genuine" employment, they certainly acted to maintain individuals' UI entitlements relative to what they would otherwise have been.

13 Because the LFS definitions of public sector workers differ from those in our administrative data, an adjustment was made using the Survey of Employment, Earnings and Hours. The public sector, in this report, includes government-supplied health and education services.

Table 19

[illegible]	Agric	Fish	Forest	Mines	Manu	Const	Trans	Trade	Fire	Serv	Public	Other	Total
Before C-17	6.30	24.92	21.16	5.05	8.76	9.80	4.98	4.36	2.68	3.04	7.93	–	5.26
After C-17	3.96	20.03	16.76	4.15	7.16	7.76	3.98	3.52	2.91	2.54	6.00	–	4.29
Loss	1.35	4.90	4.44	0.87	1.57	1.84	1.02	0.76	0.35	0.70	1.33	–	0.97
[illegible]													
Before C-17	4.04	8.98	24.70	8.76	7.26	17.09	4.40	4.42	3.34	4.29	6.22	–	6.51
After C-17	3.12	7.09	19.67	7.62	6.04	13.33	3.65	3.70	2.77	3.41	5.07	–	5.26
Loss	0.92	1.90	5.03	2.14	1.22	3.76	0.85	0.72	0.57	0.85	1.15	–	1.26

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Table 20
Per Capita Weeks of UI Eligibility by Province
Allowing for a Behavioural Change in Weeks Worked

(a) Women:	Nfld	PEI	NS	NB	Que	Ont	Man	Sask	Alta	BC	Total
Before C-17	5.21	6.39	3.11	4.11	2.80	1.51	1.52	1.30	1.45	1.47	2.03
After C-17	4.42	5.33	2.52	3.37	2.30	1.23	1.25	1.06	1.18	1.16	1.68
Loss	0.79	1.05	0.58	0.73	0.50	0.29	0.26	0.23	0.27	0.31	0.36
(b) Men:											
Before C-17	7.54	8.69	4.90	6.39	4.12	2.24	2.25	2.18	2.29	2.48	3.07
After C-17	6.30	7.23	3.96	5.18	3.38	1.81	1.82	1.76	1.78	1.94	2.50
Loss	1.24	1.46	0.94	1.21	0.74	0.44	0.42	0.42	0.51	0.54	0.57

Table 21

(a) Women	Apple	Pfizer	Parent	Nitrex	Mazz	Camel	Trans	Trade	FBE	Dare	Public	Other	Total
Before C-17	8.13	27.10	26.70	7.13	11.21	11.66	6.66	6.32	4.03	6.02	10.13	--	9.20
After C-17	4.10	19.30	20.10	5.60	9.06	9.16	5.14	4.04	3.35	3.97	9.08	--	8.87
Loss	1.03	7.80	6.60	1.53	2.35	2.50	1.54	1.48	0.67	1.16	2.07	--	1.62
(b) Men:													
Before C-17	4.54	9.54	29.13	12.67	9.88	20.15	5.78	6.20	5.00	5.07	8.90	--	9.72
After C-17	3.49	7.00	22.52	9.49	9.00	16.14	4.60	5.06	4.12	4.62	7.10	--	8.76
Loss	1.35	2.6	6.61	3.35	1.69	5.02	1.19	1.24	0.97	1.45	1.69	--	1.97

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Table 22
Per Capita Weeks of UI Eligibility by Province for All Separations
Assuming a Behavioural Response in Employment Only

(a) Women:	Nfld	PEI	NS	NB	Que	Ont	Man	Sask	Alta	BC	Total
Before C-17	5.73	7.19	3.75	4.75	3.59	2.28	2.10	1.73	2.29	2.31	2.79
After C-17	4.59	5.67	2.87	3.72	2.84	1.77	1.66	1.33	1.78	1.80	2.17
Loss	1.14	1.52	0.88	1.02	0.75	0.51	0.44	0.39	0.51	0.51	0.62
(b) Men:											
Before C-17	8.17	9.53	5.72	7.23	5.23	3.29	3.07	2.72	3.39	3.68	4.12
After C-17	6.51	7.30	4.36	5.66	4.14	2.55	2.40	2.11	2.60	2.79	3.19
Loss	1.66	2.24	1.36	1.58	1.09	0.74	0.67	0.61	0.79	0.89	0.93

UI system, however, workers in those industries lost as much as five times as much, even when behavioural changes to mitigate the effects of C-17 are taken into account. Even after these losses, however, the fishing and forestry industries derive much greater subsidies from the UI system than other industries, as the eligibility losses came from a very high base.

Table 20 performs the same exercise as Table 19 except by provinces. Because the losses shown here are now per capita rather than per worker, they are even smaller. Again, since the Atlantic provinces, and to some extent Quebec are much heavier users of the UI system due to their more frequent layoffs, they lose more than other provinces. Even after C-17, however, they benefit much more from the UI system than the rest of Canada. Tables 21 and 22 perform the same exercise as Tables 19 and 20, but on a per separation basis, rather than a per claimant one. Overall, the magnitude of the numbers are somewhat larger since, claimants being a subset of all separations, there are more weeks of eligibility from all separations to be averaged across each province or industry. However, apart from the difference in the level, the pattern across provinces and industries is very similar to that for claimants.

5. Results: Effects of C-17 on UI Receipts

In the previous section we analysed the effect of Bill C-17 on the amount of UI benefits workers know they can count on when they become unemployed — workers' UI entitlements. While this is certainly a quantity of direct interest to workers, it is also the case that most workers in Canada do not exhaust their full entitlement of UI weeks. For a number of reasons, including assessing the effects of C-17 on the government's actual expenditures, as well as the total dollar amount of the UI subsidy going to various provinces and industries, it is also interesting to know the effects Bill C-17 had on the actual number of weeks of UI received by workers. That is the goal of this section.

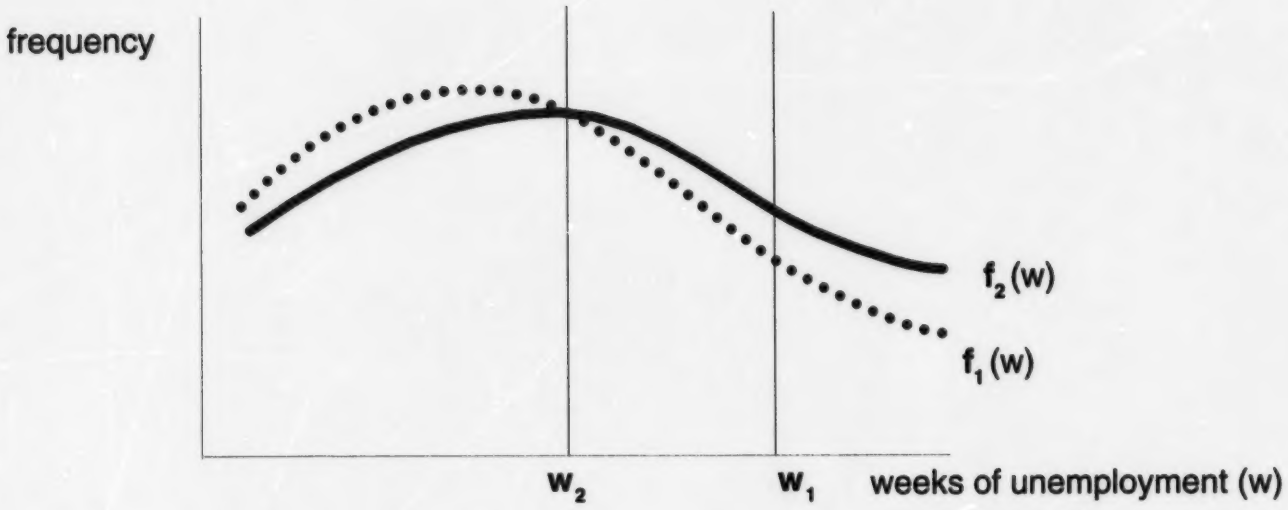
As we noted in Section 2, assessing the effect of C-17 on UI receipt is somewhat harder than assessing its effects on entitlements, because — in addition to the changes in qualifying weeks of unemployment analysed in the previous section — a second kind of behavioural change could play an important role in modifying the direct effects of the legislation. In particular, in addition to increasing the number of work weeks people accumulate before they become unemployed, the UI entitlement cuts in C-17 could also affect the amount of time people remain unemployed once they start collecting benefits. We term this latter effect an effect on unemployment durations, in contrast to the effect on employment durations already examined.

Theoretical considerations

Interestingly, if individuals respond to UI entitlement cuts by searching harder, or sooner, for jobs while they are unemployed, the effect — unlike the behavioural changes in employment durations already examined, which mitigate the effects of cuts on UI receipt — should be to accentuate, or reinforce, the direct decline in UI receipt caused by the legislative changes in Bill C-17.[14] To see this, consider the situation in Figure 8, where we show two hypothetical distributions of unemployment durations, $f_1(w)$ and $f_2(w)$, before and after a cut in an individual's UI entitlement from w_1 to w_2 weeks respectively. As drawn, the cut in UI

[14] According to standard economic intuition, they should however mitigate, the Bill's negative effects on workers' utility or well being, and probably on cash income too, as they substitute employment income for UI income. The intuition is the same as how consumers dampen the effects of price increases on their utility by substituting away from the more expensive products.

Figure 8
Hypothetical Distributions of Unemployment Spells Under Two Different UI Benefit Entitlements (w_1 and w_2)



entitlements induces some workers, who would have found jobs in the interval [w_2, w_1], to search for work sooner and harder, so that they continue to find jobs before the (now earlier) expiry date of their UI benefits.

... earlier job-finding induced by UI entitlement cuts should accentuate the decline in UI receipt that is directly caused by the cuts themselves.

In terms of Figure 8, the mean number of weeks of UI received when the maximum entitlement was w_1 is given by:

$$\int_{w=0}^{w_1} w f_1(w)\, dw + w_1(1 - F_1(w_1)) \qquad (1)$$

where F_1 is the cumulative distribution function corresponding to the density f_1. Workers with longer unemployment durations than w_1 exhaust entitlement cut from w_1 to w_2 weeks does not induce any change in job search behaviour, then the new mean number of UI weeks received would be:

$$\int_{w=0}^{w_2} w f_1\, dw + w_2(1 - F_1(w_2)) \qquad (2)$$

Clearly, this is lower than in (1), because all that has happened is that benefits are exhausted sooner, and more individuals exhaust their benefits. Finally, if individuals respond to the entitlement cuts by finding new jobs sooner, to avoid spending time without either UI benefits or employment income, mean weeks of UI receipt will be:

$$\int_{w=0}^{w_2} w f_{2(w)}\, dw + w_2(1 - F_2(w_2)) \qquad (3)$$

Not only is this lower than (1), it is also lower than (2) because the density function f_2 puts more weight on shorter durations. Thus, earlier job-finding induced by UI entitlement cuts should accentuate the decline in UI receipt that is directly caused by the cuts themselves.

No behavioural change

We begin our analysis of the effects of C-17 on UI receipt with Table 23 and Figure 9, which show how large an effect C-17 would be likely to have on UI receipt in the absence of any behavioural changes at all. In the top half of Figure 9 and in columns 1 and 3 of Table 23, we show the

Table 23
Distribution of Weeks of UI Received
Pre- and Post C-17

	Women		Men	
	Pre-C-17 No Beh. Change	Post-C-17	Pre-C-17 No Beh. Change	Post-C-17
0	5.34	10.21	5.72	11.21
1	1.08	1.08	1.52	1.52
2	1.27	1.26	1.47	1.46
3	1.46	1.46	1.60	1.59
4	1.72	1.71	1.69	1.68
5	2.24	2.22	1.67	1.66
6	2.81	2.81	1.93	1.92
7	3.19	3.18	1.88	1.87
8	2.53	2.52	1.72	1.71
9	2.04	2.03	1.77	1.76
10	1.87	1.86	1.91	1.90
11	1.89	1.88	1.85	1.84
12	1.61	1.60	1.73	1.72
13	1.49	1.48	1.88	1.86
14	1.41	1.41	1.83	1.82
15	1.84	1.83	2.22	2.19
16	1.40	1.43	1.91	1.96
17	1.44	1.50	1.96	2.07
18	1.34	1.47	1.93	2.18
19	1.37	1.54	2.12	2.44
20	1.31	1.87	2.11	2.74
21	1.53	2.02	2.16	2.65
22	1.34	2.34	2.05	3.18
23	1.52	2.33	2.27	3.08
24	1.69	2.87	2.21	3.33
25	2.15	3.08	2.19	3.10
26	1.46	2.90	2.04	3.39
27	1.68	2.46	2.24	3.00
28	1.76	2.56	2.01	2.76
29	1.74	2.31	2.01	2.35
30	1.84	2.47	2.05	2.47
31	1.86	2.17	2.03	2.15
32	1.75	2.69	1.94	2.61
33	1.79	2.64	2.06	2.43
34	1.87	2.05	1.87	1.87
35	1.99	1.64	2.15	1.37
36	2.02	1.97	2.01	1.48
37	2.09	1.24	2.19	0.92
38	2.22	1.17	2.10	0.85
39	3.61	1.02	3.23	0.63
40	1.80	0.98	1.52	0.64
41	1.59	0.89	1.35	0.58
42	1.28	1.14	1.01	0.78
43	1.41	0.84	1.06	0.49
44	1.27	1.17	0.92	0.72
45	1.51	0.90	1.15	0.55
46	1.20	1.58	0.80	0.95
47	1.27	0.69	0.88	0.43
48	1.57	1.16	0.98	0.78
49	2.28	0.54	1.51	0.32
50	8.23	1.85	5.57	1.08

actual distribution of weeks of UI received by all individuals who claimed UI in our first window period, before the introduction of Bill C-17.

Interestingly, a substantial fraction of both men and women — indeed over 8 percent of women — received a full 50 weeks of benefits. A substantial fraction also received zero weeks, which in the current context means they initiated an application for benefits but either found re-employment during the two-week waiting `period, or were disqualified from benefits. In the bottom half of the Figure 9, and in columns 2 and 4 of Table 23, we present the distribution of "truncated" weeks of UI receipt for this same sample of individuals. "Truncated" benefit weeks, for each individual who claimed UI in our pre-C-17 window, are equal to actual UI benefit weeks received, if these are less than the number of weeks that person would be entitled to had the new, C-17 rules been in place. If actual (pre-C-17) weeks are greater than what the person would have received under the C-17 rules (given his or her local unemployment rate and employment history) then truncated weeks equal their C-17 entitlement: absent any behavioural changes, this person would exhaust their benefits under the new, C-17 rules and receive the maximum number of weeks of UI for which they are now eligible.

As the bottom panels of Figure 9 show, under the C-17 rules, many individuals who previously would have qualified for UI benefits would receive no benefits at all after C-17, because their short employment histories (of 10 or 11 weeks) now disqualify them from benefits Also of interest, however, is the dramatic decline in the number of UI claims predicted to last a full 50 weeks, and the increase in the fraction lasting 20 to 35 weeks. It is much harder to qualify for a full 50 weeks of benefits under the C-17 rules than before; many individuals who would previously have qualified for a full 50 weeks, absent any behavioural change, would now find themselves exhausting their benefits at a lower limit. Overall, it is our impression that the C-17 system is designed, much more than the previous one, to "reserve" these "full year" benefits to workers with continuous employment histories, and this is apparent in the distribution of entitlements.

In Tables 24 we ask what would happen to mean weeks of UI actually received per claim if there were no behavioural changes at all; thus we simply apply the C-17 rules to the distribution of ROE weeks and of actual UI spells existing before C-17. (These are just means of the distributions in Table 23, overall and disaggregated by industry and province). Clearly, compared to the reductions in UI entitlements examined in the previous section, the mean losses shown in this Table, of a little over 4 weeks per UI claim, are smaller, because not all individuals exhaust their UI entitlements. Overall, however, the results show a very similar

Figure 9
Window 1. UI Receipt Pre- and Post-C-17

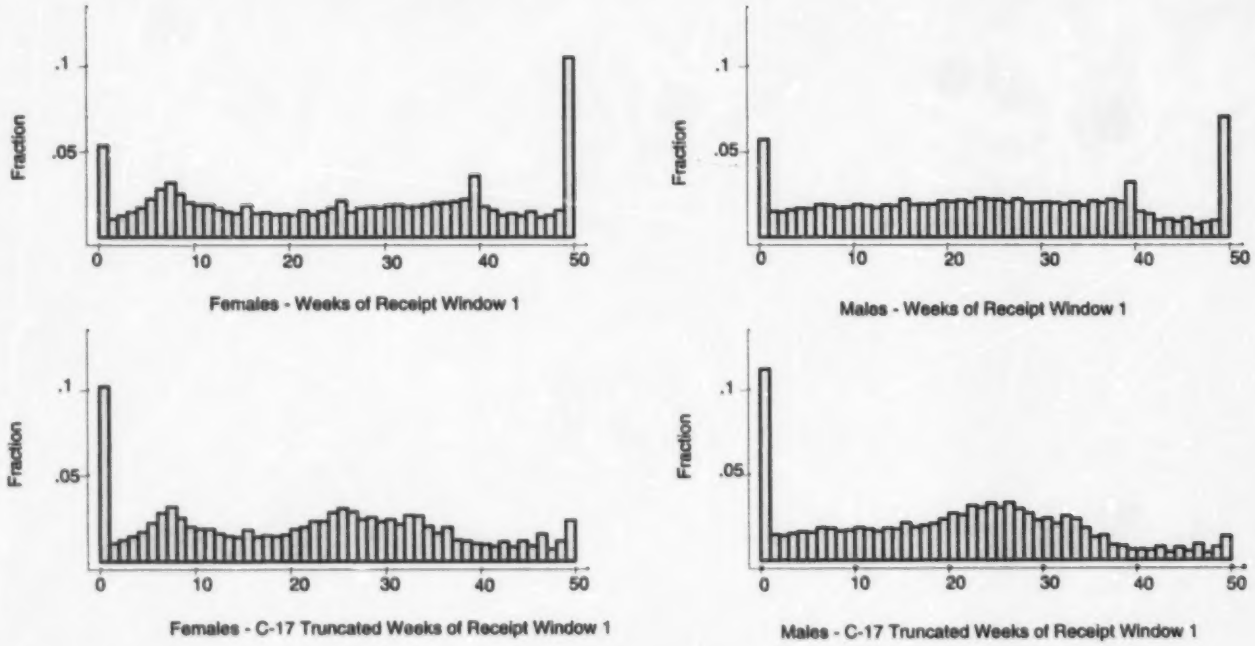


Table 24

Table 24
Mean Weeks of EI Benefit per [illegible] by Industry
Assuming No Extension [illegible]

(a) Women	Agric	Fish	Forest	Mines	Manu	Const	Trans	Trade	FIRE	Serv	Public	Other	Total
Before C-17	29.1	35.9	29.8	23.0	25.0	29.8	21.8	29.4	28.8	28.3	21.1	29.8	25.5
After C-17	21.7	12.7	19.8	19.8	19.8	23.5	18.8	24.9	25.1	20.2	18.3	24.5	21.2
Loss	7.4	23.2	9.8	3.2	5.2	6.1	3.2	4.5	3.7	5.1	2.8	5.1	4.3
(b) Men:													
Before C-17	25.8	33.6	25.9	17.5	20.9	24.5	21.9	36.6	26.4	26.6	24.2	26.1	24.1
After C-17	19.5	13.2	17.4	16.5	17.9	20.3	18.7	22.5	22.8	22.0	19.6	21.3	19.9
Loss	6.3	20.4	8.5	2.0	3.0	4.2	3.2	4.1	3.6	4.6	4.6	4.8	4.2

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industrial pattern to those found in UI entitlements in the previous section: massive losses are predicted in fishing, and significantly larger than average losses are predicted in agriculture, forestry and construction, industries where unstable employment histories are common.

... once behavioural adjustment in weeks of work is allowed, the pattern of losses is much more evenly distributed across industries than when it is not. Increases in qualifying weeks among workers in the high-UI-use industries played an important role in mitigating the effects of Bill C-17 on the number of weeks these workers weeks received UI benefits.

Allowing for behavioural changes

In Table 25 we ask what would happen to individuals' UI receipt if, in response to the legislation, individuals were able to adjust their qualifying weeks to the levels actually seen after C-17, but (conditional on qualifying weeks) they had the same length of unemployment spells as before. Thus behavioural change in employment durations is allowed, but not in unemployment durations. Because — like Table 15, and like Tables 26, 28 and 29 which follow — these tables are per UI claim and base their "after" calculations on the post-C-17 distribution of SV insured weeks, it is important to recall that the "after" estimates in this table are conditional on claiming UI. Like Table 15, they thus do not include UI losses due to a failure to qualify at all. In Section 3 we showed however that this feature of the SV-based data does not materially alter our estimates of the industrial or provincial pattern of C-17-induced losses when behavioural change in qualifying weeks is allowed. The main result of Table 25 is that, once behavioural adjustment in weeks of work is allowed, the pattern of losses is much more evenly distributed across industries than when it is not: Increases in qualifying weeks among workers in the high-UI-use industries (fishing, agriculture, forestry, and construction) played an important role in mitigating the effects of Bill C-17 on the number of weeks these workers weeks received UI benefits.

.... there is essentially no evidence that, on a national level, the eligibility cutbacks in C-17 caused any earlier job finding among UI recipients than before.

Table 26 finally incorporates the "new" behavioural response that might play a role in worker's UI receipt, but did not play a role in our calculations of initial eligibility: the possibility that the shorter UI entitlements under the new Bill may induce workers to find new jobs faster than they did before. It does this by using the actual post-C-17, rather than the truncated pre-C-17, distribution of UI spells to calculate mean weeks of receipt. Concerning the national totals, the most striking thing about Table 26 is the similarity of the numbers to those in Table 25: there is essentially no evidence that, on a national level, the eligibility cutbacks in C-17 caused any earlier job finding among UI recipients than before. Essentially, the truncated distribution of benefit weeks describes the actual very well, implying that instead of finding new jobs earlier, people simply exhausted their benefits earlier than they would have when entitlements were cut.[15]

[15] The absence of an increase in overall mean losses in Table 26, relative to Table 25, as would be predicted by relatively standard search models, is especially noteworthy because, given the modest improvement in macroeconomic conditions over the period, one might have expected unemployment durations to fall somewhat due to purely cyclical factors.

Table 25

(a) Women:	Agric	Fish	Forest	Mines	Manu	Const	Trans	Trade	FIRE	Serv	Public	Other	Total
Before C-17	29.1	35.9	29.6	23.0	25.0	29.6	21.8	29.4	28.8	28.3	21.1	29.6	25.5
After C-17	23.9	27.5	23.2	19.7	21.6	25.8	18.3	26.0	26.1	24.8	18.4	24.7	22.0
Loss	5.2	8.4	6.4	3.3	3.4	3.8	3.5	3.4	2.7	3.7	2.7	4.9	3.5
(b) Men:													
Before C-17	25.8	33.8	25.9	17.5	20.9	24.5	21.9	26.6	26.4	26.6	24.2	26.1	24.1
After C-17	22.1	28.2	21.3	16.8	18.8	21.2	19.3	23.7	23.0	23.2	20.8	22.8	21.2
Loss	3.7	5.4	4.6	-1.3	2.1	3.3	2.6	2.9	2.5	3.4	3.4	3.3	2.9

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Table 26

(a) Women:	Agric	Fish	Forest	Mines	Manu	Const	Trans	Trade	FIRE	Serv	Public	Other	Total
Before C-17	29.1	35.9	29.6	23.0	25.0	29.6	21.8	29.4	28.8	28.5	21.1	29.6	25.5
After C-17	23.5	29.8	26.6	18.5	22.1	24.8	17.8	25.9	24.4	24.2	17.9	25.8	21.8
Loss	5.6	6.1	3.0	4.5	2.9	4.8	4.2	3.5	4.4	4.1	3.3	3.8	3.7
(b) Men:													
Before C-17	25.8	33.6	25.0	17.5	20.9	24.5	21.0	26.6	26.4	26.6	24.2	26.1	24.1
After C-17	22.2	29.6	21.8	16.3	19.0	21.0	19.2	23.5	23.1	23.1	20.3	22.0	21.2
Loss	3.6	4.0	4.1	1.2	1.9	3.5	2.7	3.1	3.3	3.5	3.9	4.2	2.8

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Of some interest, also, is the pattern of losses in Table 26, relative to Table 25. In the two highest-UI-use industries, forestry and fishing, allowing for behavioural change in unemployment durations further mitigates, rather than accentuating as expected, the impact of C-17 on their receipt of UI. What this implies is that, at least in the period before benefits expiry, workers on UI in those industries actually became less likely to take a new job, rather than more likely. This may be because workers felt a greater need to "use up" every week of UI entitlement they still had, thus making even more "efficient" use of the system, at least in terms of extracting benefit weeks from any given employment history.

Tables 27 to 29 present parallel results to those in Tables 24 to 26 for provinces rather than industries, with very similar results. Focusing on Newfoundland as illustrative of a trend common to the Atlantic provinces, Bill C-17 reduced the number of weeks of UI actually received during an average UI claim by 4.2 weeks for men, and 5.1 weeks for women. These numbers are each about a week higher than their respective national averages, but would have been much higher had workers not made the significant changes in qualifying weeks of work they actually made. As before, changes in job finding rates among workers on claim play a negligible role in affecting the incidence of C-17-induced cuts in UI receipt.

Person based unit of analysis (per worker and per capita)

As in the previous section, our final perspective on the effects of C-17 on UI receipt expresses these effects in per-worker or per-capita, rather than per UI-claim terms. Because some industries are much more prone to unstable employment histories than others, and thus are much more likely to lead to the initiation of UI claims, this can cast quite a different perspective on our results. Nationally, Table 30 shows that Bill C-17 caused the average working woman in Canada to receive half a week less of UI benefits per year; the cost to the average working man was .44 weeks of benefits. However the average Canadian worker only received 3 to 3.5 weeks of UI benefits per year to begin with, compared to an astounding 22 weeks per year received by women in the fishing industry, and almost 15 weeks per year received by men and women in forestry. Not surprisingly, because their initial reliance on the system was so extreme, workers in these industries also experienced the biggest average annual reductions in actual weeks of UI received; in the most extreme case (women in fishing) the loss was 5 weeks. Even after these disproportionate losses though, workers in those industries still receive many more weeks of UI benefits per year than workers in any other Canadian industry.

Table 27
Mean Weeks of UI Receipt per UI Claim by Province
Assuming No Behavioural Change

(a) Women:	Nfld	PEI	NS	NB	Que	Ont	Man	Sask	Alta	BC	Total
Before C-17	32.6	31.4	28.5	29.5	26.3	23.1	22.4	21.4	24.6	23.9	25.5
After C-17	18.7	18.3	22.4	19.0	22.7	20.5	19.9	19.3	21.6	20.5	21.2
Loss	13.9	13.1	6.1	10.5	3.6	2.6	2.5	2.1	3.0	3.4	4.3
(b) Men:											
Before C-17	30.7	29.7	27.4	28.2	25.1	21.9	21.0	20.8	22.3	21.8	24.1
After C-17	17.7	16.6	20.8	18.2	21.3	19.5	18.6	18.7	19.8	19.0	19.9
Loss	13.0	13.1	6.6	10.0	3.8	2.4	2.4	2.1	2.5	2.8	4.2

Table 28
Mean Weeks of UI Receipt per UI Claim by Province
Allowing for a Behavioural Response in Weeks of Employment

(a) Women:	Nfld	PEI	NS	NB	Que	Ont	Man	Sask	Alta	BC	Total
Before C-17	32.6	31.4	28.5	29.5	26.3	23.1	22.4	21.4	24.6	23.9	25.5
After C-17	27.4	28.1	24.3	24.4	23.4	20.4	19.7	18.9	21.7	20.0	22.0
Loss	5.2	3.3	4.2	5.1	2.9	2.7	2.7	2.5	2.9	3.9	3.5
(b) Men:											
Before C-17	30.7	29.7	27.4	28.2	25.1	21.9	21.0	20.8	22.3	21.8	24.1
After C-17	26.0	26.4	23.6	24.2	22.1	19.7	18.9	18.3	19.9	19.0	21.2
Loss	4.7	3.3	3.8	4.0	3.0	2.2	2.1	2.5	2.4	2.8	2.9

Table 29
Mean Weeks of UI Receipt per UI Claim by Province
Allowing for a Behavioural Response in Weeks of Employment and Weeks of Unemployment

(a) Women:	Nfld	PEI	NS	NB	Que	Ont	Man	Sask	Alta	BC	Total
Before C-17	32.6	31.4	28.5	29.5	26.3	23.1	22.4	21.4	24.6	23.9	25.5
After C-17	27.5	28.5	24.2	25.2	23.0	19.9	19.4	16.5	20.4	19.5	21.8
Loss	5.1	2.9	4.3	4.3	3.3	3.2	3.0	4.9	4.2	4.4	3.7
(b) Men:											
Before C-17	30.7	29.7	27.4	28.2	25.1	21.9	21.0	20.8	22.3	21.8	24.1
After C-17	26.5	26.7	23.4	24.3	22.3	19.2	19.9	18.1	19.0	18.6	21.2
Loss	4.2	3.0	4.0	3.9	2.8	2.7	1.1	2.7	3.3	3.2	2.9

Table 30

(a) Women:	Agric	Fish	Forest	Mines	Manu	Const	Trans	Trade	FIRE	Serv	Public	Other	Total
Before C-17	3.92	22.26	14.75	2.63	4.02	6.55	2.40	2.63	1.07	2.31	3.39	-	2.99
After C-17	3.22	17.05	11.56	2.26	4.25	5.71	2.02	2.56	1.52	2.01	2.96	-	2.46
Loss	0.70	5.21	3.19	0.38	0.67	0.84	0.39	0.33	0.16	0.30	0.43	-	0.50
(b) Men													
Before C-17	2.59	7.34	14.61	3.91	3.36	9.90	2.15	2.61	1.94	2.57	3.39	-	3.57
After C-17	2.22	6.16	12.18	4.20	3.02	8.56	1.89	2.33	1.76	2.24	2.91	-	3.13
Loss	0.37	1.18	2.63	-0.29	0.34	1.33	0.25	0.28	0.18	0.33	0.48	-	0.44

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Nationally, Table 31 shows that the average woman aged 15 or over living in Canada (whether working or not) received 0.16 fewer weeks of UI benefits as a result of Bill C-17; the average man lost 0.22 weeks of benefits. Unsurprisingly perhaps, the largest per capita losses occurred in Newfoundland, with a maximum of 0.80 weeks per year for male Newfoundlanders. Even after the cuts, however, residents of the Atlantic provinces, and to a significant extent Quebec, still receive many more weeks of UI benefits than workers in the other provinces. While an "average" male in Ontario received one week of UI benefits per year after C-17, men in Quebec received twice as much — two weeks — those in Newfoundland more than four times as much, and those in PEI more than five times as much. Thus, while clearly having a disproportionate impact on those provinces and industries which were the highest users of the UI system, Bill C-17 has not, by any means, ended the massive cross-subsidization of provinces east of the Ottawa River, and of the agricultural, fishing, forestry, and construction industries, by the other provinces and industries in Canada.

Table 31
Per Capita Weeks of UI Receipt by Province
Assuming a Behavioural Response in Weeks of Employment

(a) Women:	Nfld	PEI	NS	NB	Que	Ont	Man	Sask	Alta	BC	Total
Before C-17	3.80	4.48	1.96	2.78	1.59	0.78	0.80	0.67	0.80	0.82	1.16
After C-17	3.19	4.01	1.67	2.30	1.42	0.69	0.70	0.59	0.71	0.69	0.99
Loss	0.61	0.47	0.29	0.48	0.18	0.09	0.10	0.08	0.09	0.13	0.16
(b) Men:											
Before C-17	5.23	5.77	3.01	4.16	2.29	1.11	1.16	1.17	1.19	1.27	1.69
After C-17	4.43	5.13	2.59	3.57	2.00	1.00	1.04	1.00	1.06	1.11	1.47
Loss	0.80	0.64	0.42	0.59	0.27	0.11	0.12	0.14	0.13	0.16	0.22

6. Summary

Bill C-17 rather quietly imposed what are probably the largest cutbacks in Canada's Unemployment Insurance (now Employment insurance) systemsince it was first introduced, both making it harder for individuals to qualify for a claim at all, and reducing the number of weeks of benefits claimants were entitled to by as much as 16 weeks, depending on their employment history and local labour market conditions. In this report we examine which workers — in terms of province, industry and gender — were hurt the most by these benefit cuts, as well as the extent to which workers were able to make changes in their economic behaviour that cushioned the impact of those cuts.

Overall, we find that Bill C-17 reduced the number of benefit weeks for which a separating worker was eligible by 7.6 weeks for both men and women, and reduced the number of benefit weeks actually received in an average UI claim by about 3 weeks for men and 4 weeks for women. Interestingly, not only are these losses fairly similar across gender lines, they also exhibit only modest variation by province or by industry. Losses are, however higher in the high-unemployment provinces and industries, with — for example — Newfoundland experiencing the largest provincial receipt loss per claim of 5.1 weeks for women, and fishing the largest industrial receipt loss per claim of 6.1 weeks, again for women.

A key reason why C-17-induced losses per separation do not vary more dramatically across provinces and industries concerns behavioural changes in qualifying weeks, concentrated in the high-unemployment provinces and industries. Especially in those provinces and industries, we find that workers were able to accumulate enough extra weeks of work to substantially mitigate the effects the Bill would otherwise have had on their UI eligibility. While in some cases --notably the fishing industry — these extra weeks of work may have been the results of other, compensatory government programs, they play an important role in determining the ultimate industrial and regional impact of the UI cutbacks in Bill C-17 whatever their source.

Finally, while C-17's impact on UI eligibility and receipt per job separation were surprisingly equally distributed across provinces and industries, it is important to note that its per worker, or per-capita impact was not. Because workers in high-unemployment provinces and industries (essentially the Atlantic provinces and to some extent Quebec, and the primary industries plus construction) are much more likely to experience a job separation, a randomly selected worker in those provinces and

industries could expect to lose many more weeks of UI benefits than a worker elsewhere in Canada due to C-17. For example, an average women employed in the fishing industry, and an average man employed in the forestry industry, both collected about 25 weeks of UI benefits per year before the introduction of C-17, a number which fell by 5 weeks to 20 after C-17. Canada-wide, average weeks of UI receipt fell by about one week per worker, from about 5 to 4 for women and 6 to 5 for men. It follows that, while clearly having a disproportionate impact on those provinces and industries which were the highest users of the UI system, Bill C-17 has not, by any means, ended the massive cross-subsidization of provinces east of the Ottawa River, and of the agricultural, fishing, forestry, and construction industries, by the other provinces and industries in Canada.

References

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Data Appendix

As mentioned, the data used in this report come from HRDC administrative files. To be included in our sample, a worker had to experience a job separation in one of two window periods, March 1993-February 1994, or August 1994-July 1995. Formally, our windows in DDD weeks are: window one, 1419 to 1470; and window two, 1493 to 1544. Subtract 600 from these numbers to convert them to those currently used in operating the UI system. In defining these samples, job separations are dated by the last week worked. If this data is missing, then several alternatives are employed (for example, the mid-point of the last month is used if it is available), thus for a small number of cases the last week is measured with error. As is detailed in the report, we conduct analyses in two ways: a "separation-based" approach which follows all workers experiencing a separation and determines their subsequent UI entitlement, and a "claim-based" one which focuses on the length of claims once established. Our sample is limited to workers who separated from their last job for reasons of "short work" and "other," and we are only looking at regular UI claims, not special benefits.

The samples used in this final report were taken from the August 1996 update of the ROE file and the June 1996 update of the SV file. This implies that while we should observe almost all of the job separations in the second window in the record of employment (ROE) file, we do not observe all of the UI claims near the end of the second window in the status vector (SV) file. Further, it is clear that data on UI benefit expirations will only be available for the first five months of the second window, thus only the first 5 months of each window are used for the claim data.

Perhaps more crucially, the UI-region of each worker must be identified in order to calculate that worker's eligibility. Given the data available, this is quite difficult and can only be done with error. For those who claim UI, the economic region can be identified, but it cannot be directly ascertained for those who do not claim. As a proxy HRDC provided us with the UI region based on the employer's postal code. For those who claim UI, this can be compared with the actual region. Problems are obvious. Most employers in, for example, Newfoundland employ workers who then claim in that province although not necessarily in the same UI region. In contrast, however, employers with, for example, Toronto postal codes employ workers in all of the 62 UI regions across Canada. To illustrate, only 65 percent of the men in the window one sample who had a Toronto employer claimed UI in the Toronto region. Overall, the imputed UI-region appears to be correct about 75 percent of the time. Some of

this is attributable to a "head office" effect. It also results from workers who either move to, or live, in a different region than their employer. (It is even possible that some workers may choose their region strategically.) This is a serious limitation when dealing with the eligibility of those who do not claim UI, which is of particular interest in determining those workers who are completely disentitled from, or discouraged from applying for, UI by the changes associated with Bill C-17.

The classification of industries used in our analysis is that provided by HRDC on its administrative data files. It may be worth noting that the fishing industry here does not include self-employed fishermen, who are covered by a separate UI program, nor does the agricultural industry include self-employed farmers, who are not covered by any UI program. (We leave the political economy of this why this is the case to others). The public sector includes education and health services that are provided by governments.